JACOB EDWARDS LIBRARY
3 8136 0004 3048 6

Amoptico

Published by the American Optical Company
at Southbridge Massachusetts

Vol. I November 1910 No. V

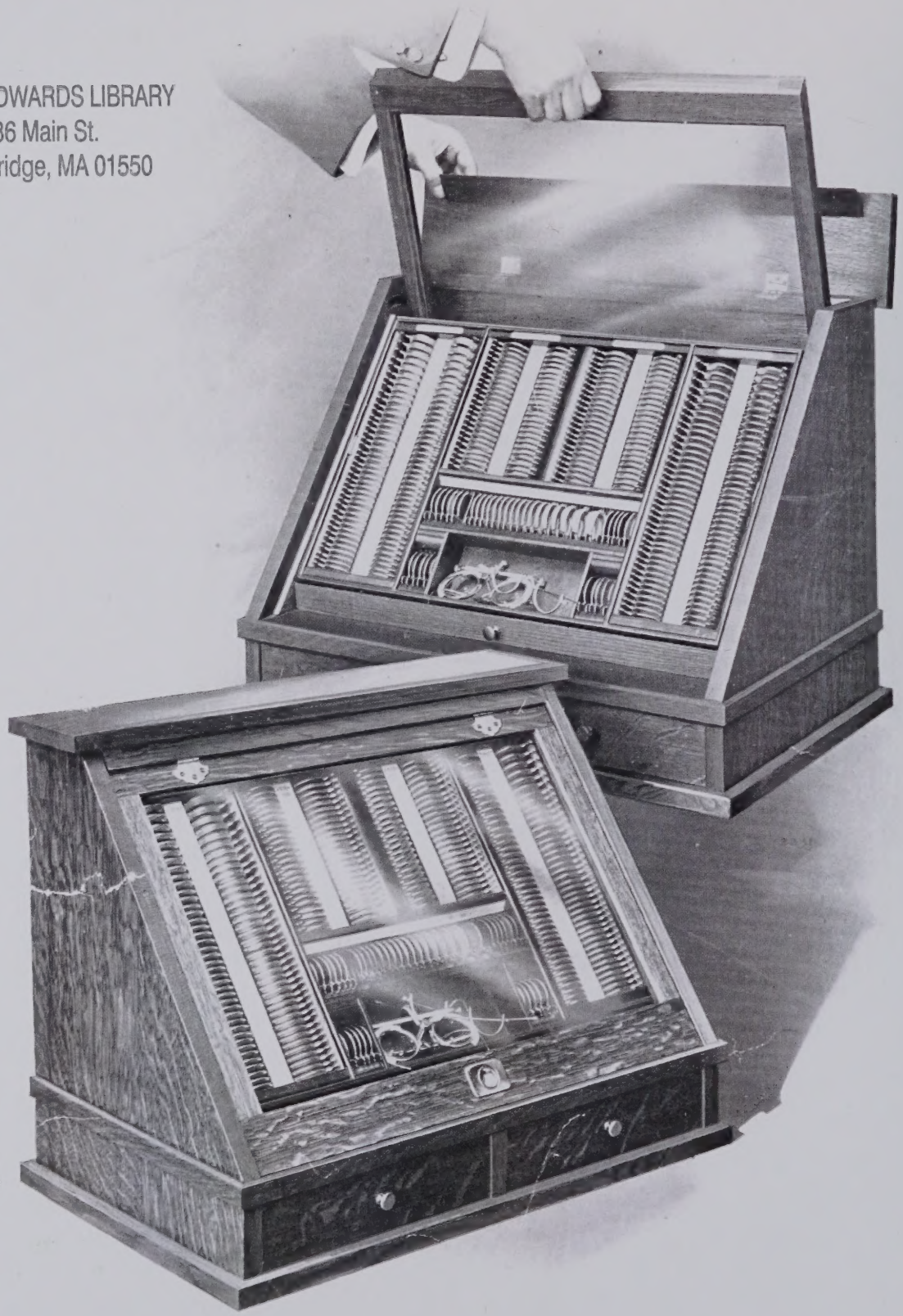
JACOB EDWARDS LIBRARY
236 Main St.
Southbridge, MA 01550



New Lensdale Plant of the American Optical Company
Total Floor Area 150,000 square feet, or a little more than 3½ acres. More than two acres of glass—224 windows, all double glazed, requiring more than 60,000 panes of glass

H
658
Amo

JACOB EDWARDS LIBRARY
236 Main St.
Southbridge, MA 01550



AOCo Trial Set No. 2241. Oak, with Glass Front

This is a page illustration from "Opticians' Trial Sets, Trial Frames and Accessories", a 44-page catalogue illustrating and describing the complete range of AOCo Trial Sets and Accessories

5/12



An Industry That Aids the Eyesight

The Making of Trial Sets

The objective method of testing for defects of vision was the natural outgrowth of the lack of facilities which hampered the early optician, but it is one that has been developed to such a high degree of refinement since that time that there appears to be little doubt as to the permanency of its position as the chief aid of the busy optometrist. Undoubtedly, a very substantial percentage of all the optical prescription work done in this country today has as its basis the trial set, and an equally large fraction of all practising oculists and optometrists look upon the trial set as an indispensable part of their equipment. It is of interest to note that prior to 1890, there were practically no reliable trial sets manufactured in this country. In fact, the medical and optometrical professions took particular satisfaction in the possession of an "imported" trial set. Most of these imported sets were made by A. Nachet, of Paris, and the standards of accuracy of their contents, while taken for granted at that time, would hardly be considered for a moment today.

Realizing that much depended upon the establishment of reliable standards in lens manufacture, the American Optical Company undertook to produce American made trial sets, which immediately gained favor for their accurate and systematic focal systems as well as their uniform exactness and interchangeability with American trial frames. Not only this, but the general excellence in the construction of the cases themselves, and the wide range of styles offered, totally eclipsed the foreign cases and brought about an entire reversal of the former conditions. The foreign makes were no longer accepted in this country, and American Optical Company cases soon enjoyed a wide sale. Shortly after, through the sale of some of these cases to our European customers, we began to develop a large foreign demand in England and on the Continent, despite the persistence of imitators of our styles and catalogue numbers.

American Optical Company Trial Sets and Trial Frames are sold today the world over. European governments have given them high official standing, outclassing other makers in their own fields. The United States Army, Navy and Hospital Service are large users, and, in fact, this line has added great prestige to the AOCo name and trade mark wherever optical wares are

JACOB EDWARDS LIBRARY
236 Main St.
Southbridge, MA 01550



Marking the Center of the Lenses

sold. Many thousands of trial sets are sold annually to supply a world's demand for dependable trial lenses.

We will attempt to give you some idea in the following pages of the numerous operations entering into the manufacture of the wide range of trial sets that are turned out in such numbers under the AOCo trade mark.

Naturally, the lenses are of prime importance—they are the trial set itself, and neither the style nor the fine finish of the container which holds them can add anything to their value for practical purposes. But it does make a great deal of difference to the optician to have them all arranged in such a manner that the necessary lens of any class may be immediately located.

To come back to the lenses, it will be apparent that their manufacture is not alone an industry in itself but a very large and important one, as may well be judged from the views and description of the Lensdale plant of the American Optical Company which have appeared in the last two issues of Amoptico, and the photograph of the new building which adorns the cover of the present issue. An attempt has already been made to give a general idea of the numerous special processes of lens manufacturing as carried out on a tremendous scale involving the production of many thousand gross of finished lenses annually.

Sufficient has been said to convey some idea of how very many particular operations are necessary to the completion of even the commonest forms of Centex spectacle lenses, and it will be apparent that this applies with far greater force to the manufacture of what are really master lenses—the lenses of the trial set.

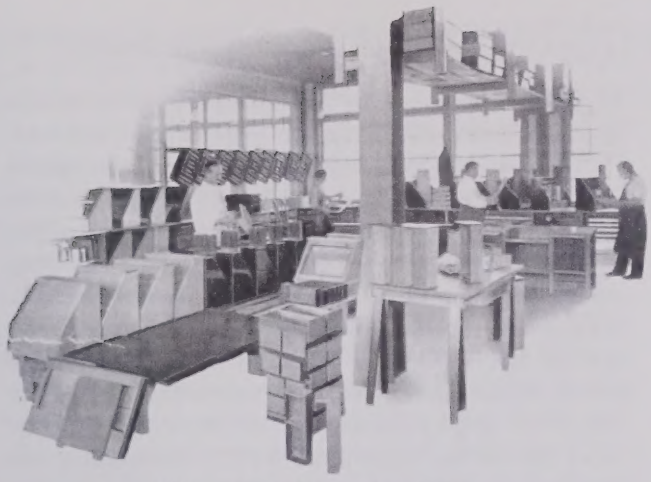
It must not be understood from this that any different or any more painstaking methods of operation are employed in the manufacture of the lenses for making up trial sets than are followed in the manufacturing of lenses for regular use, but the inspection and testing of trial set lenses is naturally exacting in the extreme. The slightest error of curvature or the merest imperfection — probably invisible to any but the most expert inspector—is sufficient to condemn them for this purpose An error in the master lens might apparently magnify or correspondingly diminish the extent of the correction required in certain cases and thus render the refractionist's work altogether abortive.

Too much cannot be said regarding the importance of securing the highest degree of accuracy in the lenses and unremitting attention to the upholding of the AOCo standards in this respect has been responsible for the reputation which AOCo Trial Sets have achieved.

Trial lenses are made in two sizes, measuring exactly 36.3 mm. and 31.5 mm. in diameter. For convenience in referring to them, they are designated simply as 36 mm. and 32 mm. respectively. The trial rings measure 37.6 mm. and 32.8 mm. and for the same reason are known as 38 mm. and 33 mm. Owing to the greater accuracy of measurement as well as convenience of reference that it permits, the metric system has been adopted by the American Optical Company in the manufacture of trial lenses and accessories and will be found an advantage by the optometrist. In the latest catalogue covering this line, known as "Opticians' Trial Sets, Trial Frames and Accessories", the diameter of the trial rings is denoted by their respective catalogue numbers, making it unnecessary to state the size when referring to them.



Neutralizing Trial Set Lenses



Where the Cabinet Work is Done

Up to ten or fifteen years ago, it was customary to test for the commoner defects of vision alone and the trial set was accordingly a simple affair. It usually consisted of nothing but sphericals, such as "Contents 'L'" as listed in the catalogue above mentioned. This contains 24 pairs each of sphericals in concave and convex, ranging from 0.25 to 8.00, with Trial Frame 2220. Contrast this with what is now considered necessary in a trial set to meet every need of the up-to-date refractionist. As an instance of this "Contents 'E'" may be cited. This consists of no less than 40 pairs each of concave and convex sphericals ranging from 0.12 to 20.00: 24 pairs each concave and convex cylinders, ranging from 0.12 to 8.00, and 8½ pairs of prisms, one each 0.50, 1, 2, 3 and 4, and two each, 5, 6, 8, 10, 12, 15 and 20. In addition to the foregoing, there are 23 disks and colored glasses, as follows: one blank, two each pinhole, stenopeic, cross-lines: one each white, red and blue shades, 2, 4, and 6, smoke shades, 1, 2, 3, 4, 5 and 6, frosted, half frosted, Maddox prism, Maddox rod and chromatic test, with Trial Frames No. 2387 B, Wells temple, and No. 2220, and one set of test types.

Between these two extremes, it will be evident that the selection possible is so great as not to permit of detailed description outside of a catalogue, many of the sets only differing in the range of the various classes of test lenses. For example "Contents 'I'" comprise but six pairs each concave and convex sphericals and six pairs each concave and convex cylinders, with five disks and colored glasses and one three-cell trial frame, the number of lenses employed frequently depending upon whether the trial set is intended for office use, or is to be carried in a traveling case.

Regular sets are listed having 14 pairs of sphericals with 9 pairs of cylinders: 20 pairs of sphericals with 11 pairs of cylinders and 4½ pairs of prisms: 28 pairs of sphericals and 17 pairs of cylinders, with 4 pairs of prisms: 30 pairs of sphericals and 18 pairs of cylinders, 5½ pairs prisms: 32 pairs of sphericals and 20 pairs of cylinders, 5 pairs prisms: 35 pairs of sphericals and 21 pairs of cylinders, 7½ pairs prisms, also 40 pairs of sphericals and 24 pairs of cylinders, 8½ pairs prisms, with disks and trial frames to correspond in each instance.

In addition to these, there are several special sets, such as prism sets, "Contents 'K'" consisting of 10 pairs of prisms, either square or round; also bifocal sets and the like.

In all about forty different styles of trial sets are listed, and with our facilities for manufacturing, orders may be filled at short notice, many of the more staple assortments being carried in stock. Where none of those listed meet the requirements, special sets will be made to order, but it will be evident that orders for regular styles can be filled most promptly, as a trial set with a special assortment of lenses, or requiring a specially constructed case, must be made from beginning to end. It will be noted that the sets regularly listed have been selected with a view to meeting every possible requirement, in order to avoid the necessity of ordering special sets, as the specification of even a single pair of lenses differing from that of the regular assortment of foci, involves in the making of new focus strips, or a specially constructed case and tray, and accordingly adds materially to the cost.

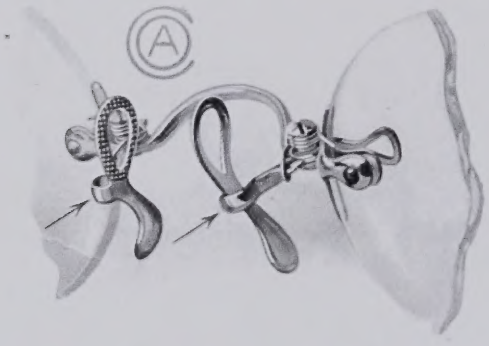
Next in importance to the trial lenses themselves, come the trial frames on which the AOCo holds or controls many patents. They possess numerous exclusive features of interest and are made in a number of different styles, to which a special article will be devoted later.



Finishing Leather-Covered Cases

Practical Facts About Finger-piece Eyeglasses

The present popularity of the finger-piece form of eyeglass construction recalls to mind some interesting bits of history which have a direct bearing upon the developments in the manufacture of these goods. Contrary to the general supposition, the original finger-piece eyeglass was not an American invention. In 1893 Jules Cottet, an ingenious Frenchman, living in the quaint town of Morez-du-Jura, in France, obtained English and French patent rights on an improvement



Only by joining the arm at the rear edge of the guard as shown, is proper opportunity afforded for adjustment (Patented)

in eyeglasses, or "pince-nez", as he called them. The fact that Monsieur Cottet had the foresight to obtain Letters Patent, not only in France but also in England and later in the United States, would seem to indicate his shrewdness, and at least some realization of the importance of his invention.

The American patent was dated May 26, 1896, and the structure covered by this patent is in many respects identical with the finger-piece mounting as it is made today. This patent was purchased by a London wholesale optical dealer, who, after holding it awhile, sold it to a prominent American jobber. Nothing was done about undertaking the manufacture of the Cottet eyeglass until after a year or two, when the much bartered patent was purchased by the American Optical Company.

Previous to the Cottet patent, three other patents were granted on devices, which, while they might possibly be considered in the same category with the finger-piece style, were of a "freakish" character; mostly elaborations of the bar-spring type of eyeglass frame.

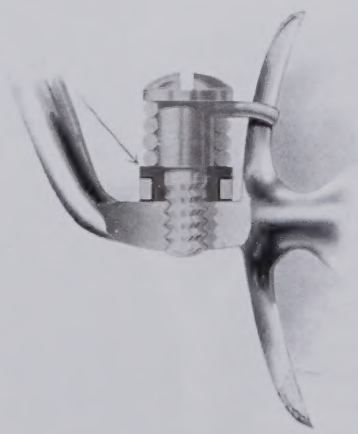
Cottet's structure called for a frame which employed the rigid "C" Bridge with springs, screws and guards much the same as in the present style, although of a rather crude design. Although there have been from time to time attempts to market a Saddle ("SS") Bridge finger-piece eyeglass, the "C" Bridge type has always been the leader and by far the more popular structure.

Few beside those directly concerned with optical manufacture realize the growth in importance of the finger-piece eyeglass and its wonderful popularity. We, ourselves, who have watched and fostered this development ever since we first introduced finger-piece styles made under the old Cottet patent, more than ten years ago, are more than surprised at the sweeping transformation that has taken place. It is, perhaps, safe to assert that a very large proportion of all the eyeglasses sold today are of the finger-piece style. Even those who were most emphatic in declaring the finger-piece eyeglass a fad of the moment when first introduced, are today numbered among its strongest adherents.

Why has this form of eyeglass suddenly become the favorite over the regular staple styles that have been on the market thirty or forty years? Has the finger-piece eyeglass come with us to stay? We think so. We further believe our reasons for this inference are of sufficient general interest to warrant a careful reading of the following by all thoughtful optometrists:

Eyeglasses, as opposed to spectacles, are dependent upon a spring action or mechanism to hold them in place upon the nose. Therefore they are dependent for their success upon a mechanical device and their construction must involve suitable mechanical principles to accomplish the desired result.

Consider, for instance, the mechanical action of the ordinary type of eyeglass mounting or frame, employing a hoop or oblong (No. 890) shaped spring and Wells offset guards. Between the bearing surface of the guards, and the nose there must be enough friction or grip, not only



Details of AOCo Finger-piece Mounting (Patent applied for) The bushing and washer effectively prevent the screw from turning

to support the weight of the glasses, but to steady them at all times and even resist a sudden jar or shock. Unless very nicely balanced there is a constant tendency to slip or tilt forward. To overcome this we bend the spring so that it will cause the guards to grip tighter, exerting *a constant tension* or pressure upon the flesh while the glasses are worn, there being no means of controlling this tension even though it may be very slight.

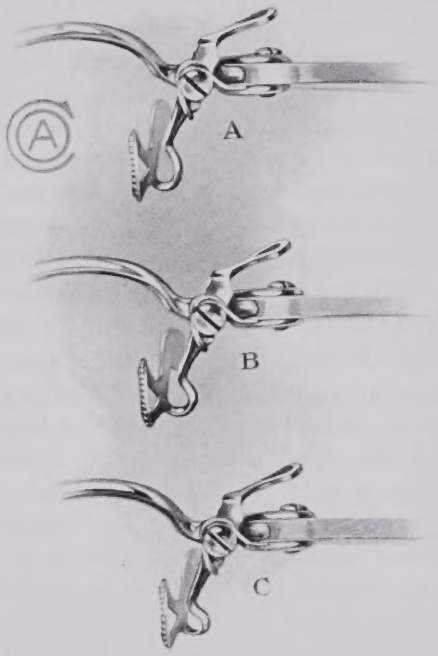
In spectacles, the nose provides a rest for the bridge and the temples serve to hold the spectacles in place. But with the ordinary type of eyeglasses the whole burden must be borne by a friction hold on the sides of the nose.

Compare this construction with finger-piece eyeglasses. When properly fitted, the weight of the glasses is supported by the nose, as with spectacles. This relieves most of the strain on the guards, which become simply a mechanical means for steadying the glasses. The pressure of the guards upon the nose need only be sufficient to accomplish this purpose. These guards exert a limited lateral pressure and then their action *stops*.

By a simple bend of the guard arm with pliers, the amount of separation between the two guards, when the mounting is worn, can be set accurately. When properly done there is no tension or constant pressure upon the nose and the glasses are worn with perfect comfort. The great benefits of this adjustment as affecting the comfort of the wearer can hardly be estimated. The public has quickly responded to this innovation of comfortable eyeglasses and those who have studied the fitting of finger-piece eyeglasses realize that this can only be accomplished with the finger-piece construction — hence its popularity.

But this is only one of the "reasons why". Another important optical advantage possessed by the finger-piece eyeglasses is the fact that the rigid bridge maintains exact pupillary distance and alignment of lenses at all times. This means that prescriptions may always be worn exact to center and at the correct axis in the case of cylinders, compounds, etc. This advantage alone is sufficient to give them preference over any type of flexible eyeglasses, according to many authorities.

The foregoing gives some reasons why finger-piece eyeglasses are so popular and why they will continue to merit public approval. Aside from these features are some other important facts which have a direct bearing upon the subject and are of special interest to the practical optometrist. We refer particularly to certain refinements in construction which are vitally important, and direct particular attention to them that you may look for these features in whatever finger-piece eyeglass you are using.



Illustrating a few of the possibilities of adjustment with the AOCo patented arm

The most important of these is the construction of the guard arm. To give satisfactory opportunity for adjustment *the arm should join the rear edge of the guard*. This means that the arm will be long enough and so placed as to allow for adjustment in any direction, up, down, forward or back. The accompanying illustration shows some possibilities of the forward and back adjustments. There are a number of styles in finger-piece eyeglasses upon the market upon which this patented construction is used and it is important to see that those you are getting are made in this way. With this structure also the vertical angle of the guard can easily be changed by a simple adjustment. In addition, the long arm has the effect of giving additional spring and ease to the bearing blades. The long arm will also permit of a ready adjustment of the distance between guards to provide a definite stop, as explained above.

What is particularly important, this rear arm attachment gives an unbroken forward edge to the guard blade and by slightly bending these edges *in* towards the nose there is no tendency for the glasses to tilt forward.

The next feature of structural importance which you should look for in your finger-piece eyeglasses is the method of assembling the parts. It is well to remember that the simplest construction is apt not only to present the best appearance when worn, but it will, as a rule, stand up the longest and give the wearer the best satisfaction.

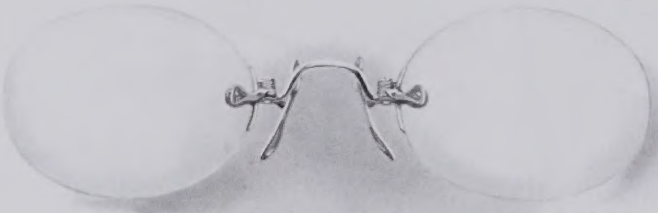
Amoptico

The action of the guard arm must be free and easy, and in this connection it is desirable that the finger-piece eyeglass you adopt should have a proper bearing in which the arm moves. This is usually accomplished by the employment of a tiny washer between the coil spring and the guard arm, allowing a free movement with no tendency to bind the arm or to loosen the screw.

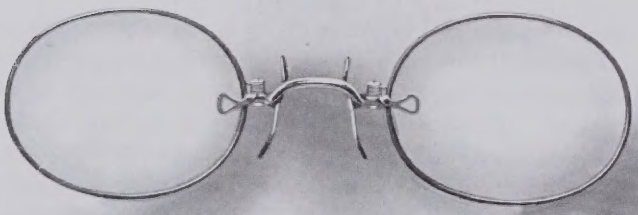
It is important that your finger-piece eyeglass should have these structural refinements. Many now on the market are made in this way and in purchasing such goods look closely to see that you are getting the benefit of all these features mentioned.

The use of rocking or rigid guards is very much a matter of preference upon which opinion may be about equally divided. Both styles have certain advantages and both are good.

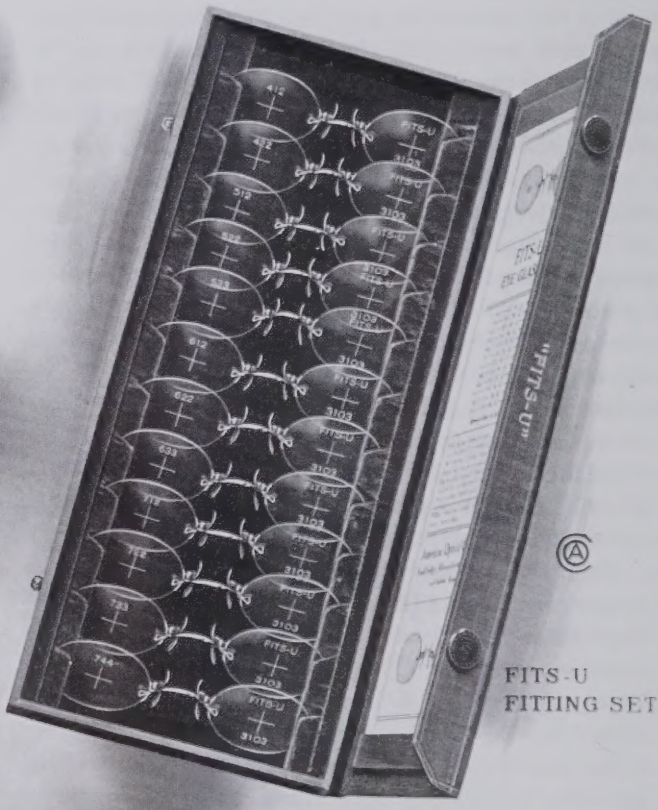
Perhaps the novelty of the finger-piece eyeglass has had its share in making these goods popular. Perhaps the fact that these glasses can be put on and off with one hand without touching the lenses is also appreciated. But most important of all, it is a recognized fact that mechanically and optically, finger-piece eyeglasses have marked a definite advance in eyeglass fitting.



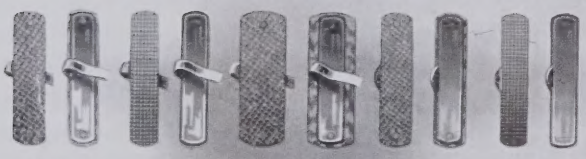
FITS-U EYEGLASS MOUNTING



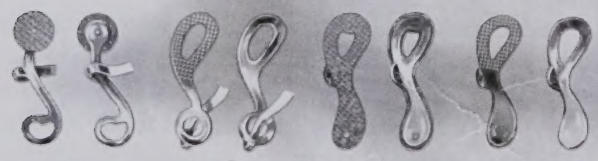
FITS-U EYEGLASS FRAME



FITS-U
FITTING SET



3111 Rigid, Zyl. | 3111 Rigid, San. | 3111 Rigid, Zyl. 5 MM | 3113 Rocking, Zyl. | 3113 Rocking, San.



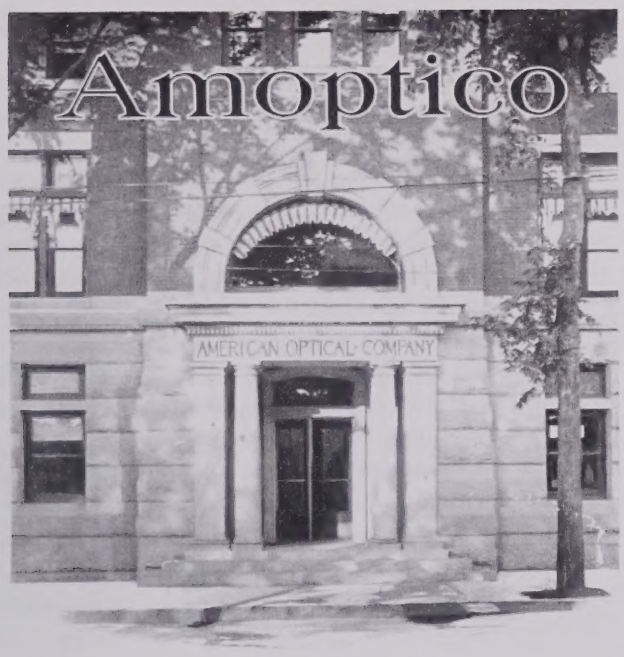
3171 Rigid, Zyl. Pad. | 3181 Rigid, San. | 3123 Rocking, Zyl. | 3123 Rocking, San.



3101 Rigid, Zyl. | 3101 Rigid, San. | 3103 Rocking, Zyl. | 3103 Rocking, San.

Complete Line of AOCo Fits-U Mountings and Frames

Order from your wholesaler by catalogue number and description to denote style of guard



Vol. 1 November, 1910 No. 5

Published Periodically by

1833 1910

American Optical Company

General Offices and Works

Southbridge, Massachusetts, U. S. A.

New York 15 Maiden Lane
Chicago . . . 150 Michigan Avenue
London . 39 Hatton Garden, E. C.

Manufacturers

Spectacle and Eyeglass Frames, Mountings and Material

Eyeglass Chains, Automatic Eyeglass Holders

Trial Sets, Trial Frames and Accessories

Automobile Goggles

Lenses

Spectacle, Eyeglass and Goggle Cases

Optical Machinery, Tools and Supplies, Etc.

After more than seventy-five years in the service of the optical world the American Optical Company stands today in the forefront among the great commercial enterprises of the nation.

Such success is not accidental—it represents the reward of foresight, application, hard work and those other qualities that build for permanent commercial supremacy.

What Do You Advertise?

In optometry, as in any profession, personal knowledge and skill forms the foundation for success. The man who best applies his knowledge in his daily work is the man who succeeds.

Emerson said: "If a man write a better book, preach a better sermon, or make a better basket than his neighbor, though he build his house in the woods, the world will make a beaten path to his door."

The wise optometrist who knows his capabilities, who realizes that the application of his knowledge will improve the sight of his fellow-man, does not wait for the world to "make a beaten path to his door". He perpares a specially paved drive with frequent and unmistakable direction posts. And at night his road is well lighted and his house is always attractive — in short he advertises himself, his ability and his wares.

The serious problem that confronts the prospective advertiser is what to say. One of two main courses may be chosen—or both, if desired. The first is to advertise one's personal skill. This is a drawing card in so far as the limitations of one's personal work will allow. The business you are doing is naturally not the extent of your ambition, nor, perhaps, the business that you can personally take care of. You are planning a future course, and in anticipation of the growth of your business it is natural to plan for business that will keep not alone yourself but others busy.

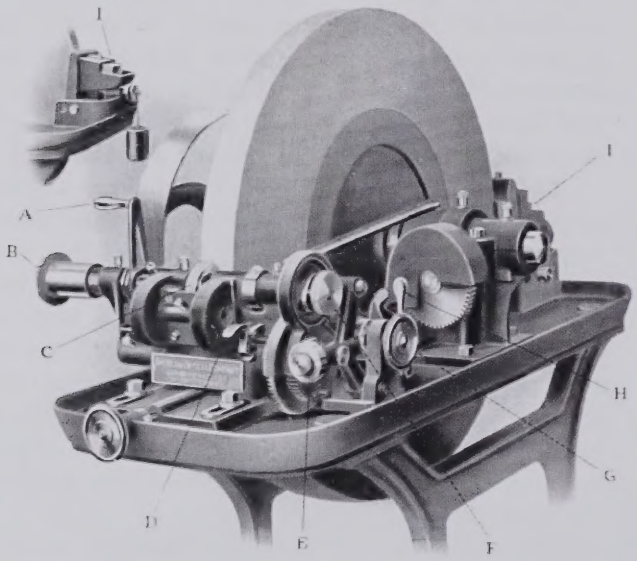
Immediately your business requires more attention than you can give to it alone, it ceases to be a personality and becomes an organization whose policy you direct. No longer can you offer your personal services, but you must offer something instead to attract the public—something that will build up and keep your business forging ahead. Quite naturally you turn to your optical wares. The personnel of your organization may change—men come and go but your store is patronized for the particular *goods* you can offer.

Your personal attention must be directed to selecting and advertising only meritorious articles. And this means goods of known and guaranteed excellence.

AOCo optical wares are used by those who know and are looking to the maintenance of permanently successful optical businesses. Seventy-eight years of service to the entire optical world places the AOCo and AOCo goods in a unique position of importance. AOCo goods are as staple as the raw materials from which they are produced. Any and all of a wonderfully complete and comprehensive line, made within one great organization, can be obtained from the stocks of representative wholesalers everywhere.

The American Automatic Rimless Edging Machine

Since the employment of frameless lenses first became so general, attempts have been made to improve the method of edging the lenses. Though apparently a simple matter, it has involved numerous difficulties, and up to a short time ago the machines designed to carry out this operation had not proven altogether satisfactory. Too much was left to the skill of the operator in the adjustment of the machine, and there was accordingly no certainty regarding the latter's operation. The chief drawback, however, was the necessity of first cutting the lenses to size.



The American Automatic Rimless Edging Machine

As the result of considerable study of the problem, supplemented by a great deal of experimenting, the American Optical Company has succeeded in perfecting a machine that not only can be depended upon to grind off a definite amount of glass at each revolution of the lens against the stone, but which will also grind uncut lenses as readily as those cut to size. This has been accomplished in part by making it unnecessary for the operator to regulate the tension of the spring holding the lenses against the stone, so that the lenses are neither broken by subjecting them to excessive pressure, nor is an unduly long time required to finish the edging, as is the case where insufficient pressure is applied.

In referring to improvements in machinery the term "automatic" is frequently overworked, but the AOCo Rimless Edging Machine will be found to merit the title in every sense of the word. It is only necessary to place the master pattern on its spindle, set the lenses — whether one or four — in the special universal holding pads, and start the machine. At each revolution, the shoe against which the pattern rests moves toward the stone a certain distance, corresponding to the amount of glass that is removed at each turn of the lenses. At the end of the last revolution, the lenses are drawn away from the stone and the machine is stopped—automatically. It has not required any attention at any stage of the process. Some idea of the rapidity of its operation may be had from the fact that at the regulation speed of the stone, 200 revolutions per minute, it will grind uncut lenses 34 x 44 mm. down to o eye in less time than this could be done on any other machine.

To edge uncut lenses, it is only necessary to set the machine to make twelve revolutions of the lenses against the stone, while to grind off a cut lens three or four are sufficient and the adjustment to accomplish this can be made instantly. The desired size of lens is easily obtained by turning a micrometer head marked with the standard sizes, to the proper adjustment. The lens pattern may be placed on its spindle either before or after the lenses have been placed between the pads. Five standard patterns are furnished with each machine. A special lens holder in which the lenses can be properly centered and set to the required axis before placing between the pads is supplied with each machine.

The stone is of corundum, measuring 20 inches in diameter by 1½-inch face, and great care is taken in its manufacture to insure every one being uniform throughout. It is mounted on large and accurately aligned bearings, giving long service without repairs. These precautions make possible work of the highest degree of accuracy, and this standard is maintained throughout the life of the stone by an automatic honing device.

It is customary to work a stone until it is no longer capable of doing good work, and then dress it off. The result of this is that it is accurate only just after it has been trued. In contrast with this, the AOCo honing device continually removes all inequalities of the grinding face, adjusting itself automatically as the stone wears away. As it is constantly in operation, a smooth and regular surface is always maintained. Provision is also made for turning off the stone with a diamond and a fixture can be supplied for this purpose when desired.

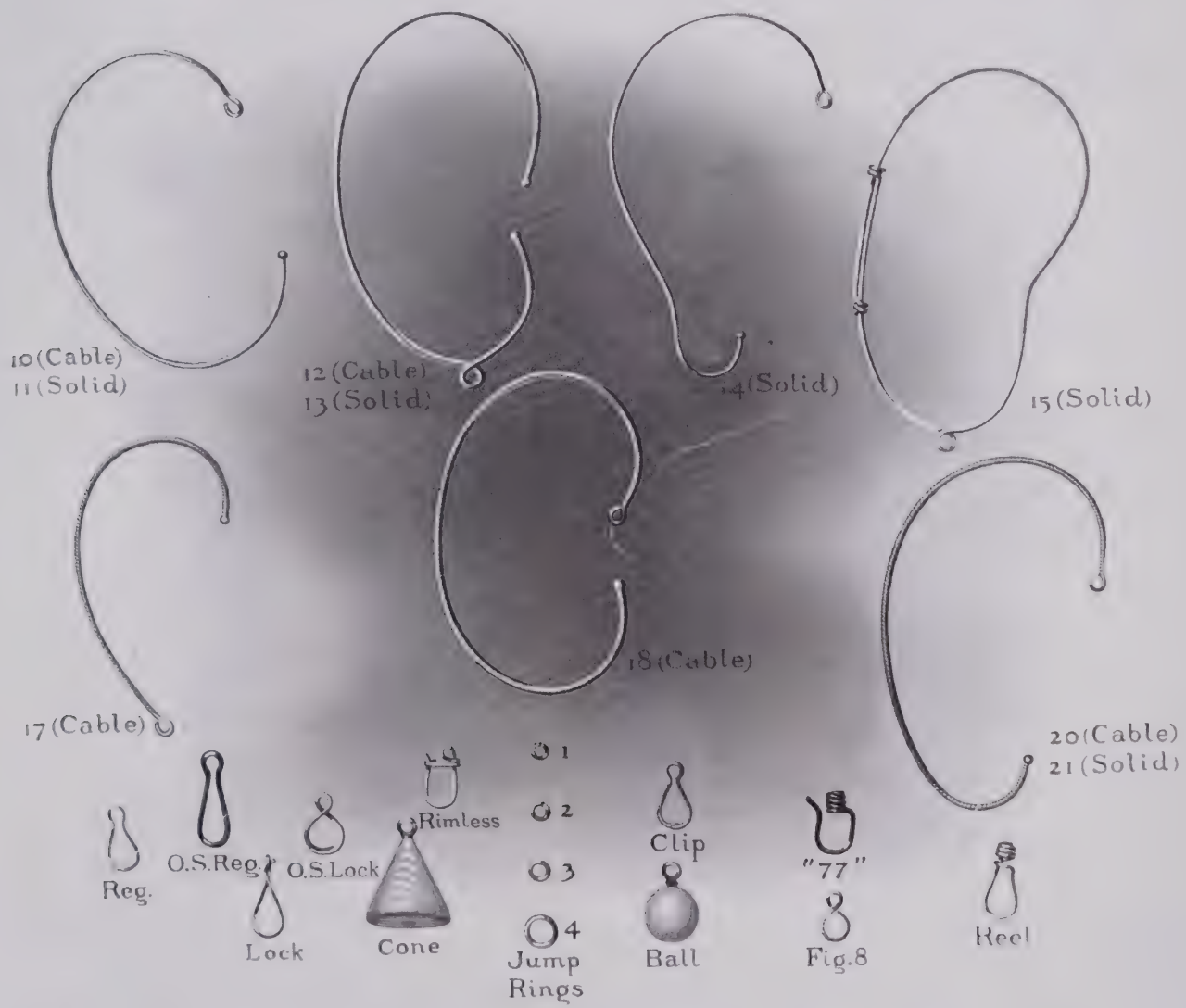
A brief description of the working of the special features of the AOCo Edging Machine will give a better idea of its simplicity, beside emphasizing the automatic nature of its operation in service. As already mentioned, the lenses are first centered in a special holder provided with the machine, by which they can be set accurately between the jaws and ground to the desired axis. When pulled down, the lever A separates the jaws to insert or

remove the lenses. B is a screw adjustment to regulate the tension of the universal chuck, or holding jaws, to give just sufficient pressure to prevent slipping, as an excess might break the lenses. This chuck is so designed that the lenses can only be inserted properly and so that they will be absolutely correct to axis in the case of cylinders, compounds and torics. The lenses are shown in position at C, while D is a trigger designed to release the chuck and permit the lenses to bear against the face of the stone.

Provision is made for grinding to all regular eye sizes, the thumb screw E being set for the size desired. The eye plate is held in position by the nut F, which permits of changing the shape of eye without disturbing the lens. By means of the thumb screw G, the machine is set to make any desired number of revolutions of the lenses against the stone, from one to twelve.

The grinding mechanism is thrown into or out of action while the machine is running by moving the clutch handle H. At I is the honing device for automatically taking up wear of the grindstone.

The AOCo Automatic Edging Machine is the product of the joint efforts of expert optical workmen and skilled machinists and is built under the supervision of mechanical engineers thoroughly versed in the design and construction of automatic machinery.



AOCo Ear Loops, Snaps and Material

Any of these styles can be furnished on AOCo Eyeglass Chains. AOCo Chains are made in various sizes of links, such as 7, 9, 12, 16, 20, 24, 28 and 32 links to the inch, in the cable, curbed and flat form. Some of them have been illustrated in previous issues of AMOPTICO

Amoptico



Some Special Features of AOCo Patented Self-closing Cases

The accompanying illustration shows some of the AOCo covering materials as they actually appear. Particular attention is called to the VICAR or imitation leather and silk materials, namely, M, MK and MS. The carved leathers are very attractive. They can be furnished on all self-closing styles except Nos. 141, 377, 703 and 704, in the following kinds of leather: K, K3, K4, V3, V4 and V6. The silk coverings, S1, S3 and S7 are very popular.

I, water-grain buffing is most largely used of the leathers.

Ornaments for Patented Self-closing Spectacle and Eyeglass Cases

	Silver Plate	Gold Plate	Coin Silver	Description
Catalogue Number	21	31	41	Band
	23	33	43	Corners
	24	34	44	Center

Corner ornaments supplied in pairs unless order specifies single corner, in which case left or right side must also be stated. All above ornaments are regularly supplied in bright finish. Your wholesaler has full sample assortments ready for holiday trade

Cementing Opifex Bifocals

The optical demands of the public are continually becoming more exacting in every branch. Particularly is this true in regard to bifocal lenses. Not only must they accomplish the desired optical effect, but for high grade work the segment giving the reading addition, must be practically invisible. Several methods exist for accomplishing this result, but for popular medium-priced lenses, Opifex Wafers (patented), as made by the American Optical Company, undoubtedly afford the best solution. These wafers are extremely thin—scarcely thicker than ordinary paper, and when properly edged and cemented, are hardly visible, especially when in position as worn. It would be impossible to market such a wafer packed by ordinary methods, but as supplied by the AOCo each wafer is cemented against a glass body, or support, of opposite curvature, thus giving it the requisite strength for edging and subsequent handling. As edging is an exceedingly delicate operation, even when cemented to the glass back, opticians are advised to purchase the wafers edged, ready for cementing to the distance lens.

This cementing operation is very simple: First wipe thoroughly with a clean cloth, both the distance lens and the exposed surface of the wafer, making sure that both are free from dust and lint from the lens wiper. Both lens and wafer must then be heated just to the point where the cement will flow freely. Avoid overheating, as this causes the formation of bubbles of gas in the cement. Heating is a very important part of the operation, but becomes simple, when an electric heater, such as is illustrated on page 35 of the AOCo machinery catalogue, is used. This is an inexpensive device that costs very little to use, while it insures proper heating in every case, as the rheostat attached to the plate gives absolute control of the temperature.

Before placing the wafer on the heater, a good sized drop of cement is spread on the exposed surface. This answers the double purpose of finally cementing the surface to the distance lens, as well as primarily giving the delicate wafer sufficient strength to bear the necessary handling while being removed from its support. The distance lens and wafer having reached the proper temperature, one of two methods may be used, to transfer the wafer.

First, the wafer may be pushed half off its support, using a small pointed piece of soft wood, then grasping the support with a pair of tweezers in the left-hand, the wafer taken by the opposite edge between the thumb and forefinger of the right, and gently slid from its support. It is then placed in position on the distance lens. If cement enough has been placed on the wafer, it will be sufficiently strong to bear the necessary handling.

The second method consists in heating the wafer as before, sliding it partly off the support, then holding it, wafer down, and over the distance lens, pushing it gently off the support and onto the final lens. The lens should be as hot as the cement will stand without bubbling. In case bubbles form, the wafer should be gently moved back and forth until they are all out from between the surfaces. The part projecting over the edge may now be ground off, and the surplus cement removed with alcohol, being careful not to allow any alcohol to work back under the edge of the wafer.

After a little practice, the whole operation can be performed in a surprisingly short time, resulting in a bifocal that is a marvel of neatness and that can be sold at a popular price.

Selling Bifocals

It has been frequently stated, and is without question true, as a rule, that an optometrist can sell his customer whatever kind of lenses and quality of goods he pleases. The man whose business is so well established in a community that the public relies implicitly upon his judgment and advice has upon his own part a certain responsibility and an obligation to the public, which demands the best he can offer in service and merchandise.

Recently there came to the writer's notice an incident which aptly illustrates the point we wish to make. A woman went to one of the leading dispensing opticians in a large Eastern city. Her prescription called for bifocal glasses. The salesman sold her the ordinary 13 by 25 mm. cement segment bifocals, the matter having been left entirely to his judgment.

Naturally, she was obliged to put up with the well known shortcomings of this type of bifocals and in fact complained frequently of her dissatisfaction. When later she discovered through friends that there were better kinds of double vision glasses to be had, such as Kryptok and Opifex Bifocals, her resentment against that optician found frequent and forcible expression in words.

It is true that some people will not pay for or cannot afford the best, but they are entitled to an opportunity to buy the best, nevertheless. Naturally, it is to the interest of the optician to sell his best goods, if possible, and if he fails to offer them for sale, not only does he miss the opportunity of a better profit, but, as in the instance cited, he actually does his customer an injustice — and loses the customer.

AOCo Optical Screws and What They are For

The high degree of precision in screw manufacture, which must be attained to produce satisfactory optical screws, led the American Optical Company to design and build special automatic screw machines for this work. These machines were constructed in the AOCo machine shops and represent the efforts of experienced mechanical engineers and expert optical workmen. This has resulted in the production of the most exact automatic screw-making machinery, designed especially for optical screw manufacture. Such machines are a guarantee of mechanical accuracy, but in themselves they would not be sufficient to insure uniformity owing to variations in stock and similar cause which occasionally result in imperfect screws. They are accordingly supplemented by a very thorough system of supervision and inspection which insures screws that are accurate to gauge, length, thread and temper.

For the convenience of the optician, the accompanying table has been prepared, giving a list of the most important optical screws in general use, together with the catalogue numbers of the various goods on which these screws are used. This table will be found valuable for reference as it serves to immediately identify the exact screw needed and makes ordering easy and certain, any of these screws as well as other numbers being regularly supplied on order—usually from stock.

To facilitate repair work, the AOCo Ideal Junior Screw Assortment is offered. This consists of a neat, cloth-covered wood case containing sixteen screw-top bottles. Each bottle is numbered so as to be readily identified by the printed list on the inside of the cover, and is held in a separate compartment.

The assortment consists of an average dozen each of Nos. 70, 716, 798, 1010, 1338 and 1638 End Piece Screws; 490 and 490 + (large, for repair), 593 and 593 + (large, for repair) Stud Screws; 590, 1790 and 1790 + (large, for repair) Glass Screws; 881 Guard Screws, 3101 Finger Piece Screws and assorted washers. The Ideal Senior Screw Assortment (Catalogue No. 4024) consists of 24 bottles, each having three times as many screws as the smaller assortment. With the AOCo Ideal Screw Assortments (Catalogue Nos. 4016 and 4024), the proper screw for almost any repair job is right at hand, making either the most useful repair outfit that the optician can invest in. These assortments sell at $2.50 ($3.50 Canadian) and $5.00, ($6.50 Canadian) per set respectively and are carried in stock by representative wholesalers. In view of their guaranteed accuracy and uniformity, you cannot afford to specify anything but AOCo screws when ordering from your wholesaler.

No. 70 End Piece Screws, used for

10	103	150	243	316	338	440	493	1081
30	113	163	248	318	346	450	500	1181
50	123	183	253	326	348	470	513	1361
60	133	200	273	328	376	480	520	1381
80	143	206	308	336	378	490	1016	

No. 716 End Piece Screws, used for

706	708	719	728	1708		901	908	1608GL
716	718	726	766	803 Catch		903	1558G	

No. 798 End Piece Screws, used for

702	708	889	1399	1659	1669
703	709	1398	1599	1668	1699

No. 1010 End Piece Screws, used for

620	1004	1010	1041	1110	1301	1311	1318	1344	206 Style E. P.
1000	1006	1016	1100	1116	1306	1316	1331	1413	
1001	1008	1018	1106	1118	1308	1317	1341	1418	

No. 1338 End Piece Screws, used for

193	358	1243	1323	1328	1343	1358
228	366	1248	1326	1333	1348	1413
356	368	1322	1326L	1338	1353	1448

No. 1638 End Piece Screws, used for

1513	1528G	1553	1618	1628	1643	1646G 21		2638
1523	1543	1558	1622	1628G	1646	2553		3553
1528	1546	1613	1623	1638	1646-21	2558		3558

No. 490 Stud Screws, regular size, and No. 490 + Stud Screws, large size, for repairs, used for

450	480	500	527	1066	1166	1296	1396	1721	1371
460	481	503	1061	1081	1181	1286	1381	1726	
470	490	520	1063	1086	1186	1361	1386	1728	

No. 593 Stud Screws, regular size, and No. 593 + Stud Screws, large size, for repairs, used for

570	590	890	1190	1263	1393	1793
580	593	893	1197	1390	1790	

No. 590 Glass Screws, regular size, and 590 + Glass Screws, large size, for repairs, used for

380	398	560	573	583	599	1393	1399
388	399	570	580	590	1390	1398	

No. 1730 Glass Screws, regular size, and No. 1790 + Glass Screws, large size, for repairs, used for

1190	1197	1560	1668	1699	1793	2693	3569
1193	1293	1659	1669	1790	2599	2699	

No. 881 Guard Screws, used for

460	500	563	1181	1381	863	881	1726
480	503	1081	1186	1386	834	981	1796
481	560	1086	1286	861	839	1716	

No. 3101 Finger Piece Screws, used for

3101	3103	3111	3113	3123	3171	3181

No. 1348 End Piece Screws, used for

193	358	1243	1323	1328	1343	1358
228	366	1248	1326	1333	1348	1443
356	368	1322	1326L	1338	1353	1448

No. 803 Ball End Piece Screws, used for

801	813	831	834	841	851	853	862	871	881
803	827	833	839	850	852	861	863	873	883

No. 1735 Ball End Piece Screws, used for

835	837	1236	1375	1377	1716	1735	1736	1741	1747
836	1235	1237	1376	1711	1717	1735L	1737	1746	

No. 1726 Ball End Piece Screws, used for

1529	1721	1722	1726	1727	1728	1729	1733

No. 1761 Bolster End Piece Screws, used for

1761	1766	1767	1776	1777

No. 493 Stud Screws, used for

440	512	522	543	803	861	881	1163	1363	1793
491	513	523	593A	812	862	883	1267	1393	1793A
493	521	523AA	801	813	871	1063	1362	1722	

No. 1793B Box Stud Screws, used for

580	583	590	593	890	891	893	1790	1791	1793

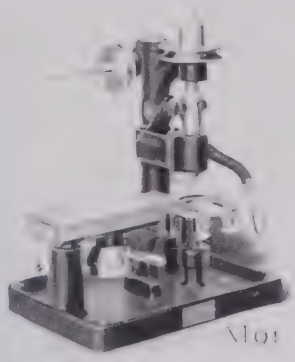
No. 893B Lens Lock Screws, used for

523 etc.	890	893	1726	1728	1790	1793
590 etc.	891	1723	1727	1729 etc.	1791	

No. 1375 Guard Screws, used for

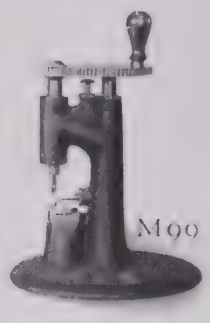
835	836	837	1235	1236	1237	1375	1376

Other style screws as No. 503 Ajax, No. 1509 Ajax, No. 523 D. P. screws, etc., may be regularly supplied on order.


M 101


M 102


M 103


M 90

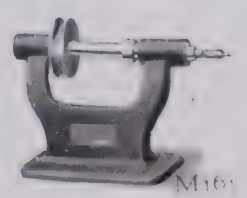
AOCo Optical Machinery

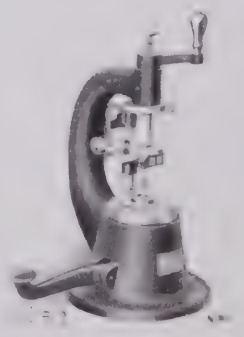
This will give you some idea of how great a range of optical machinery is made under the AOCo trade mark. It is the product of the skill of expert designers and experienced optical workers, made in the most perfectly equipped machine shop devoted exclusively to optical machinery.

M	51	Factory Standard Lens Cutting Machine (Patented)
M	52	Optician's Favorite Lens Cutting Machine (Patented)
M	91	Factory Drilling Machine (Patented)
M	92	Handy Drilling Machine
M	93	Simplex Drilling Machine
M	99	Hand Drilling Machine
M	100	Hand Drilling Machine
M	131	Polishing and Buffing Head
M	151	Hand Tapping and Broaching Machine
M	160	Upright Glass Screw Finishing Machine
M	161	Horizontal Glass Screw Finishing Machine


M 160


M 100


M 161


M 92

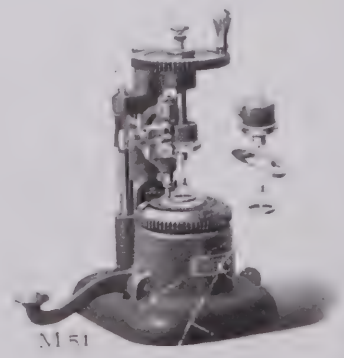
These are only a few of the machines we make. Our Catalogue, "Optical Machinery Tools and Supplies" illustrates and describes entire shop equipments. A copy will be sent in exchange for your business card.

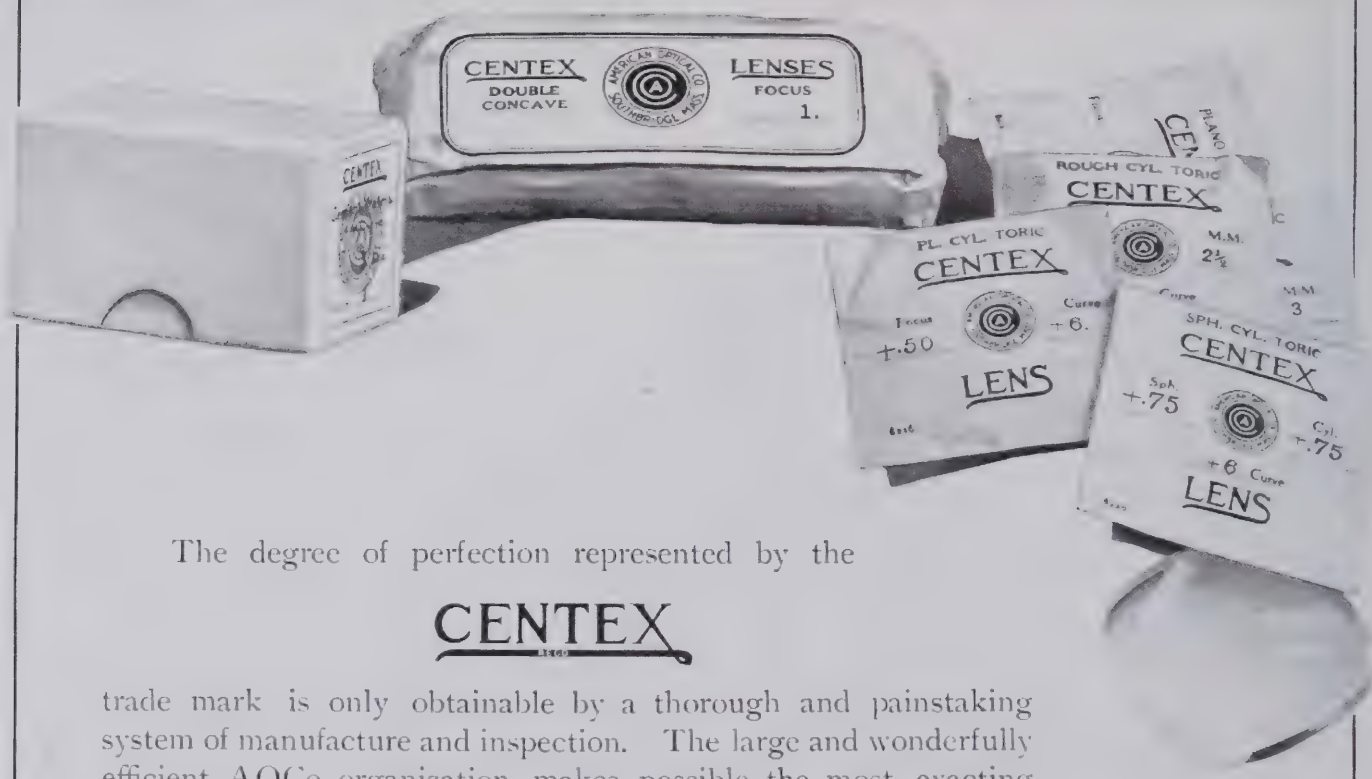
All AOCo Optical Machinery is handled by representative wholesalers.

American Optical Company


M 131


M 151


M 51



The degree of perfection represented by the

CENTEX

trade mark is only obtainable by a thorough and painstaking system of manufacture and inspection. The large and wonderfully efficient AOCo organization makes possible the most exacting discrimination in every stage of spectacle lens manufacture.

After every one of the many operations, each individual lens must be inspected and passed before it can finally be placed in a container bearing the CENTEX trake mark. At any one of these many stages it may be rejected for a defect ever so slight, which would bar it from classification under CENTEX requirements.

CENTEX Lenses are produced from a colorless crown, specially prepared optical glass of unvarying refractive index, dispersion and hardness.

CENTEX Lenses are of a standard, guaranteed under this trade mark. Radii of curvative are based on the dioptric system of measurement.

Specify CENTEX in ordering from your wholesaler.



Manufactured by

American Optical Company

General Offices and Works

Southbridge, Mass., U. S. A.

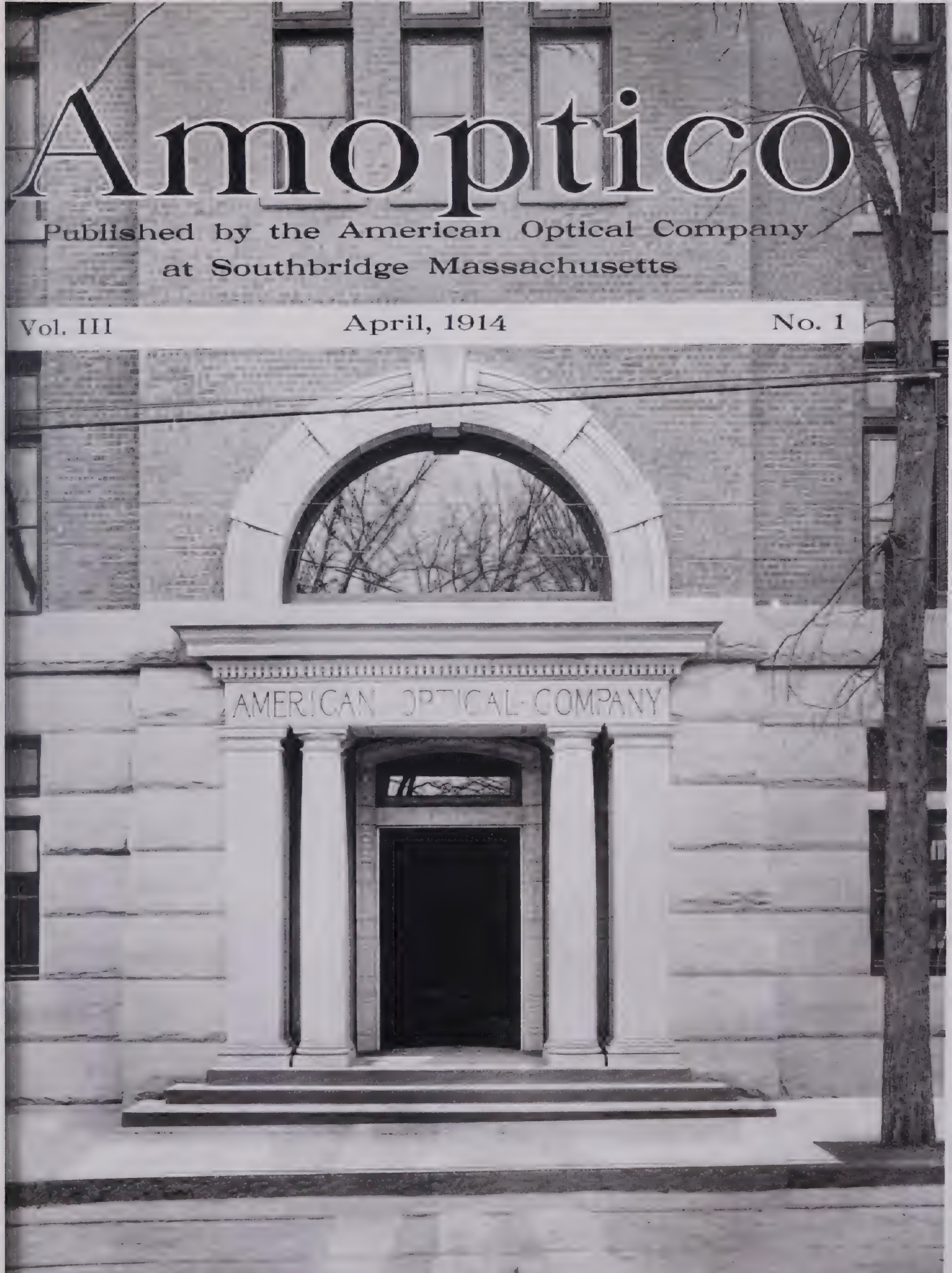
New York Chicago London

Bartlett-Orr Press, New York

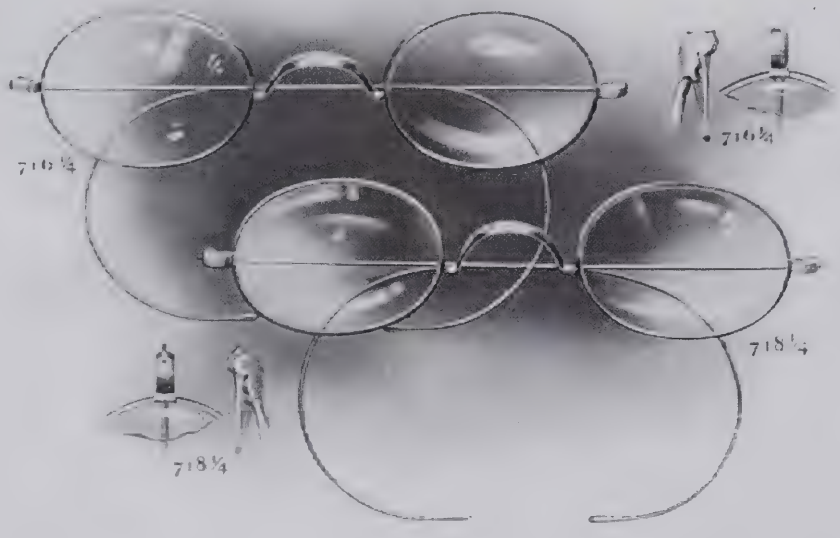
Amoptico

Published by the American Optical Company
at Southbridge Massachusetts

Vol. III April, 1914 No. 1



American Optical Company Solid Gold Goods



Riding Temple, Rounded End Piece

Catalogue No.		*Description*
Cap Joint	*Solid Joint*	
706	708	Lightest
706⅛	708⅛	Heavier bridge
716	718	Light
716⅛	718⅛	Heavier bridge
716¼	718¼	Medium
716⅜	718⅜	Heavier bridge
716½	718½	Medium bridge
716⅝	718⅝	Heavier bridge
716¾	718¾	Heavy
	Cable Temples	
726	728	Extra heavy
736	738	Heavier

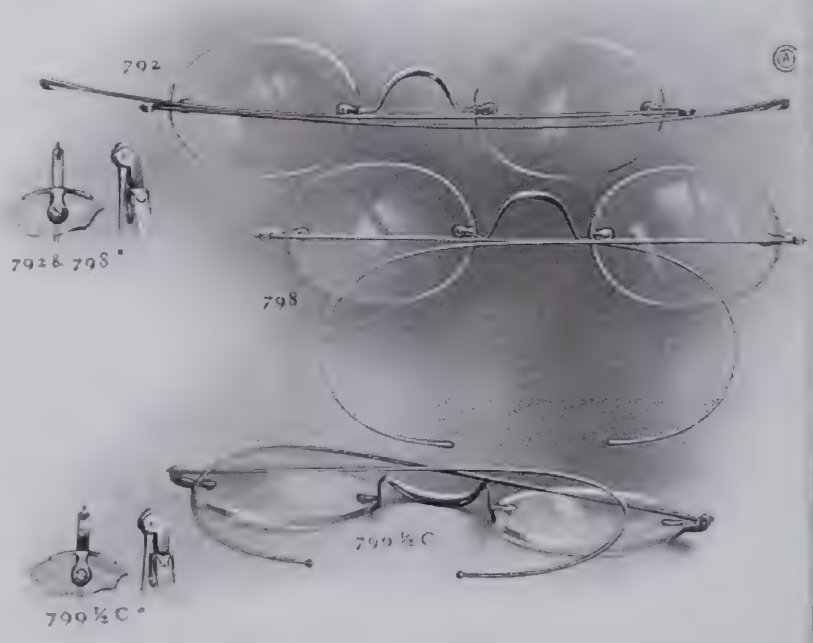
Add letter C to all catalogue numbers to designate cable temples

Look for these trade-marks on AOCo Gold goods

8 Karat	Ⓐ +
10 "	Ⓐ ⊖
14 "	Ⓐ 14K

We take no little pride in the fact that our gold goods have always enjoyed a certain prestige such as has been accorded no other make. You who have handled these goods for years know what a controlling part we have played in the development of gold goods in general, and how we have brought them to a point never attained elsewhere. When you carry the AOCo line you have a standard article recognized the world over for its beautiful workmanship and uniformity of parts. AOCo goods will always come to you just as you want them. They are always "good stock." The AOCo trade-mark should be the first thing you think of when you order gold goods of your jobber.

Catalogue No.		*Description*
Straight Temple, "C" or "SS" Bridge		
Rounded End Piece		
Solid Joint, Round Temple		
792		Light
792¼		Heavy
Rounded End Piece		
Solid Joint, Half-round Temple		
793		Light
793¼		Heavy
Riding Temple, "SS" Bridge		
Rounded End Piece		
Solid Joint	*Cap Joint*	
798	798.6	Light
798⅛	798⅛.6	Medium
798¼	798¼.6	Heavier
798½	798½.6	Heavy
798¾	798¾.6	Extra heavy
Beveled End Piece		
Solid Joint		
799		Light
799⅛		Medium
799¼		Heavier
799½		Heavy
799¾ (Cable)		Heavy



Amoptico











An Industry That Aids the Eyesight

Safeguarding the AOCo Gold Production

"What happens when a mistake is made, or one of these tiny gold pieces gets lost?" asked the visitor.

"They practically never get lost," replied the foreman of the gold department. "We watch them too carefully. When you are handling pieces of gold you simply can't make mistakes." And the sureness with which the answer was given spoke volumes for the system that made it possible. Every day thousands of dollars' worth of 10K and 14K gold is handled by scores of employees in this one department alone, yet the loss or misplacing of even the smallest item of this amount would immediately be known and traced back to the point where the error occurred.



Thousands of dollars' worth of gold is daily handled in this department

The gold which is here transformed to finished eyeglasses and spectacles is received direct from the gold stock department. There it has undergone a change in form from government gold pieces to wire or flat stock of the right shape, size, gauge, and karat to be used in manufacturing the various parts of the finished goods. A careful assay of each lot has been made to be sure that it is up to the required standard. As these pieces arrive they are accompanied by a printed form stating fully the weight, karat, etc., on which their value is based. Another weighing is immediately given them, to be sure that no mistake has been made, and then, every piece bearing its full history, they are ready to be stored in the gold department's huge vault.

Through long experience, the foremen are able to tell accurately what parts will be in demand, and a card on which is printed the maximum and minimum stock of each that should be on hand warns them when it is time to replenish.



Mistakes? No, we simply can't have them

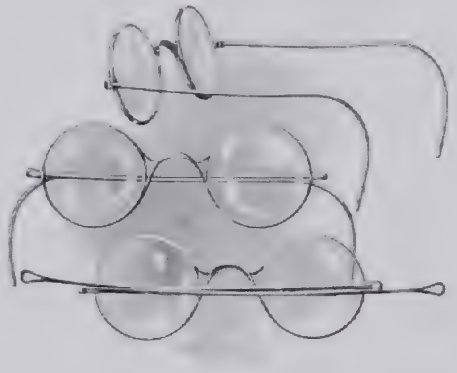
Now comes an order for a number of gold eyeglasses, perhaps of a peculiar design calling for material that is not commonly kept in stock. (If

an order for regular goods came, all the parts would be lying in readiness to be made up immediately.) The gold stock from which the special parts are to be made is taken from the vault to large balances where it is weighed with the greatest care. If it is to be divided and sent to various parts of the department for separate operations, separate slips are made out to accompany each tray of stock. In this way a perfect check on the amount of gold issued, and its destination in the department is secured.

After the special parts have been stamped out, shaped and gone through all necessary operations, they are once more returned to the office, this time with all the scraps and bits of stock left over. Once again a careful weighing is made. If for any r the weight fails to agree with the figures deter upon when the stock was first issued, the pa taining the work is immediately sent back workman to whom it was issued, and a search that invariably discloses the missing parts. takes? No, we don't have them, that's all. in a great while some tiny part may become m temporarily, but it is always found.

Hundreds of thousands of dollars in gold is stored at one time in the department's huge v more than is kept by many a town or small city Yet so perfect is the system by which this we checked in and out, that practically none is eve

Gold Varsity Spectacles Again
Have You Ordered Yet?



"I 'clar to gracious," as Uncle Remus used to say, "Ain't I never done tol you 'bout dat befo'?"

We've told you about our Gold Varsity Spectacles before, but again, as Uncle Remus says, "Flapjacks ain't good twell dey's turned ober twice."

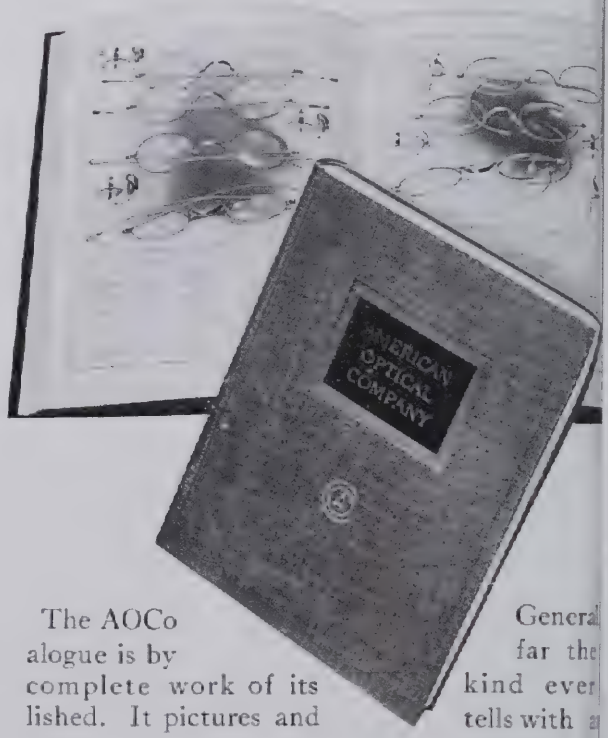
An issue of Amoptico dwelling especially on Gold Goods would not be complete without calling your attention to Varsity Spectacles again.

In our December issue we told you of the care used in making these Varsity Spectacles; how handwork enters into their manufacture so prominently, and how only the most skillful workmen are detailed for the work.

We find that results are proving that such care is justifiable, for AOCo Varsities have shown a steadily increasing sale. If you are carrying them now, you are realizing their solid value. If you aren't, take a leaf from the experience of those who are, and send in an order for them. Here are the prices:

Cat. No.	*Description 14K Gold*	*Eye Size*	*Trade price each*
2167	Heavy half riding frames	40 mm.	$20.00
	comfort cable, smooth, pear tip	42 mm.	21.00
	741 end piece	44 mm.	22.00
2163	Straight temple frames	40 mm.	16.00
	open tip, half-round temple	42 mm.	16.75
		44 mm.	17.50
2162	Straight temple frames,	40 mm.	16.00
	open tip, round temple	42 mm.	16.75
		44 mm.	17.50

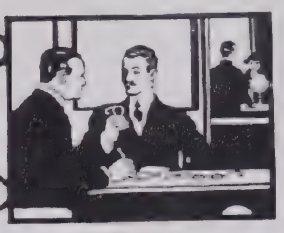
The Most Complete Catalogue
Optical Goods Ever Publishe



The AOCo General alogue is by far the complete work of its kind ever lished. It pictures and tells with a ity of all the standard lines of optical goods, a be invaluable to you when it comes to specify particular goods in which you are interested attempt has been made to make it a price list. are no prices in it. Instead it is merely a re work, designed to put you in touch with and the scope of the goods manufactured by the Am Optical Company. Every oculist, optometri optician is entitled to one of these beautiful hundred and fifty page cloth bound catalogue will find it an invaluable aid in his daily wor insure its reaching authorized parties only, write on your letterhead stationery or enclose business card.



NEW GOODS *for up-to-date* DEALERS



In practically all issues of Amoptico there are announcements of new AOCo goods which are of special interest to those who like to keep abreast of the times. You will find them worth your careful consideration. They are usually well in advance of announcements of similar goods that you will find in other publications, and give you the opportunity to be the first in your territory to display them.

Latest Improvement in Solid Gold Goods

Cable Temples With Perfex (Pear) Tips



We are glad to announce that after a long period of experimenting we have succeeded in producing comfort and regular cable temples with perfex (pear) tips. The new cable perfex pear tip is perfectly smooth without visible seam, and is exactly as strong and of the same temper as the butt of the temple.

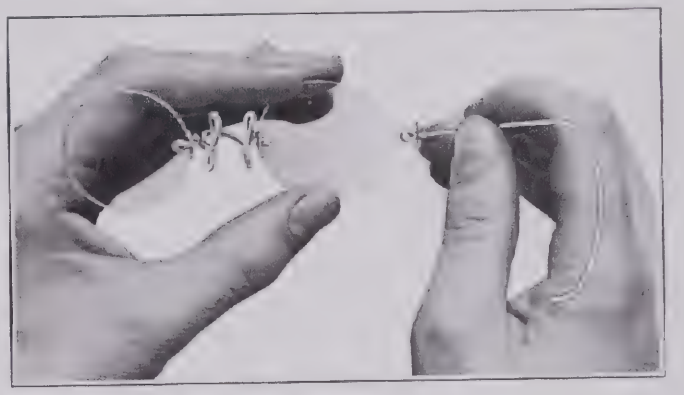
Most opticians and optometrists have found it necessary in the past to bend the pear tips on temples to prevent their digging into the ears. The new AOCo temples will make this unnecessary, as they are already bent to shape.

You should surely carry these in stock, for they are far superior in every way to all others of this kind on the market. Their advantages are perfectly apparent and easily demonstrated to your customers. Your jobber will supply you with them. No additional price for this improvement. Be sure to specify them if you want them.

Have You Seen Our Patented Safety Bows No. 1688A?

A Recent Idea With a Real Selling Punch

The man who originated the idea for the Safety Bows we are now showing here, knew glasses—not only their good points, but their weak ones, as well—otherwise he would never have thought of this highly-useful trouble-avoider, Safety Bows.



AOCo Safety Bows No. 1688A

Many people object to the appearance of even rimless spectacles, and refuse ordinarily to wear them; yet they realize, as does everyone who wears glasses, that there are certain times when the best fingerpiece mounting ever made is not an adequate safeguard to hold glasses in place. The result is that it is either necessary to carry spectacles in addition to eyeglasses, or run the risk on some occasion of dropping the eyeglasses.

With these Safety Bows, however, all this annoyance is avoided. The golf enthusiast, finding himself on the links without his spectacles, may now with the aid of these Safety Bows gain perfect security by using them in connection with his eyeglasses. All that is necessary is to bend the little straps in or out to suit the thickness of the lenses, slip them on—and you have a new pair of spectacles as secure and solid as anyone could wish. Remember that these patented Safety Bows can be supplied in

Alumnico and in Gold-filled, and may be used equally well with rimless or frame eyeglasses.

You will find them ready sellers, for it takes no technical knowledge on the part of your customers to enable them to see their advantages. On page 16 of this issue we are illustrating a new demonstration show case sign that actually displays the Safety Bows, and acts as a silent salesman. Our foreign customers will be pleased to know that signs sent to them will quote English instead of American prices.

PRICES OF AOCO PATENTED SAFETY BOWS NO. 1688A

Cat. No.	*Description*	*Trade Price Per Doz.*
1688A	With Riding Temples ⊡ 1/10 12K Gold-filled	$6.00
1388A	With Riding Temples Alumnico	$3.75
1688A (Cable)	Riding Temples ⊡ 1/10 12K Gold-filled	$7.25
1388A (Cable)	Riding Temples Alumnico	$5.00

New AOCo Lens Box Covers



The American Optical Company has recently adopted a new form of label for lens boxes with which every purchaser of lenses should be familiar. We are illustrating the design here. On all interchange work, these labels will be printed in blue to indicate bevel edge, and in red to indicate rimless lenses.

Pomona, Cal.

"It affords me great pleasure to acknowledge the receipt of your general catalogue. It is certainly a work of art and one that every optometrist should be the proud possessor of. Thanking you for the compliment and honor conferred, I remain,

"Fraternally yours, a booster for Fits-U,"

Dr. L. C. Hannum.

Brandon, Man.

"Accept my hearty thanks for your latest catalogue, which arrived a few days ago. I also extend congratulations to you for having been elected a member of the Rice Leaders' Association. You are certainly entitled to membership if for no other reason than the publication of such an 'optical encyclopedia' as your latest catalogue."

G. C. Hughes.

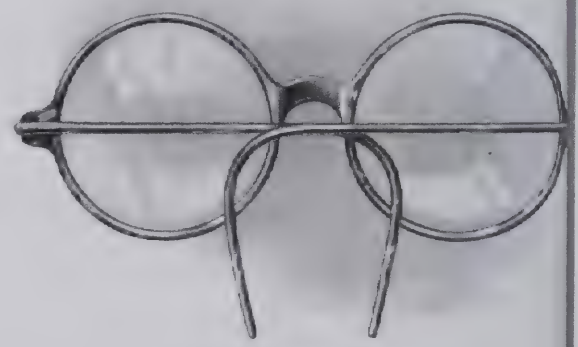
Trenton, N. J.

"I have been handling the Fits-U Mountings for the past three or four years and I find them to be as represented and am able to adjust them to almost any nose."

Earl V. Smith.

A Good Time to Stock these Zyloware Goggles

The zyloware goggles shown here are the l development in an already full line, but these such distinctive qualities for use and comfort



AOCo Zyloware Goggle

they find a place different from all other Here's the "how" and "why" of it; the point can talk to your customer who is looking for th thing.

Large eye goggles must at best be rather heav ing to the weight of the glass lenses. Add to th weight of a metal frame, and support it all o bridge of a man's nose, and the pressure is con able. With a zyloware frame, the weight is re to a minimum and the broad bearing surface t bridge together with the flexible temples give to tired nerves and muscles.

A good zyloware frame bearing the AOCo t mark on the back of the endpiece costs no more the ordinary cheap celluloid article. They designed strictly from the standpoint of the op etrist, and are consistently shaped in every par

Zyloware goggle frames (55 m/m eye) are sup in any of the popular shades as enumerated b Artistically they are very handsome, for a lenses match the amber finish almost perfectly. will find that these goods meet a ready sale carry a mighty fine profit, too. Order through jobber at the following prices:

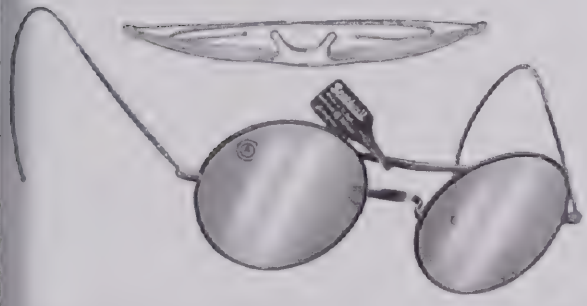
Cat. No.	*Description*	*Price p*
R617	Dark Shell color with Mi-coquille Amber lenses	$
R637	Amber color with Mi-coquille Amber lenses	
R647	Light Shell color with Mi-coquille Amber lenses	

"Madam, the feather in your hat is getting i eye," exclaimed a man in a crowd. The w turned around, looked him over, and then inq "Why don't you wear glasses?"—*New York Gl*

Special Packing for "Speedwell" Goggles No. 3348 B. E.

In our February number we announced a new Goggle bearing the trade name "Speedwell," which we are now manufacturing. Not only is the Goggle itself quite individual, but its packing is unique, as well.





Attached to the goggle is a red tag with white lettering bearing the name "Speedwell" on one side and the retail price on the other ($3.00 for Gold-filled and $2.00 for the Japtol finish). Each goggle will be in our Number 377 Japtol Case, which, in turn, will be enclosed in a special black cardboard box with printed matter displayed in gold bronze ink and inside the case will be another label bearing the trade-mark name "Speedwell."

This unusual packing will attract attention when a goggle alone might not. It will help you materially to make a sale. You can buy these Speedwell goggles of your jobber, with either white or amber curved lenses. The amber will be supplied unless otherwise ordered.

Cat. No.	*Description*	*Trade Price Per Doz.*
3648	Gold-filled Speedwell Goggles, White or Amber Lenses	$17.50
3348 B. E.	Japtol Speedwell Goggle, White or Amber Lenses	12.25

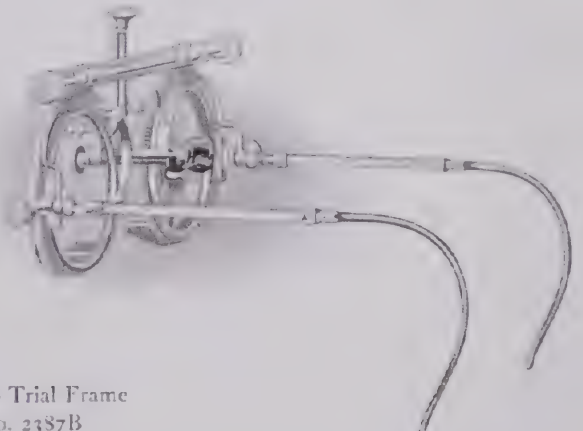
Trial Frames with Comfort Cable Temples

The old trial frame was a relic of the dark ages. It was heavy, uncomfortable, with a trick of sagging upon the patient's head, the small sharp temples cut into the skin, and the bridge raised an abrasion on the nose.

If you will reflect a moment, you will admit that the past few years have seen important advances in the lessening of weight and the increasing of comfort in trial frames. We are very glad to announce a new comfort cable temple for trial frames, which we believe is the utmost in refinement, and which will do away with any discomfort and consequent displeasure.

The frame is very light, weighing, without lenses, only 1¾ oz. It has all the adjustments which are necessary to secure a correct and proper fitting frame and mounting, including adjustment for P. D., height, inclination of bridge, length of temple, and axis of cylinder. With the exception of the adjustment for temple length, correct measure is secured by knurled thumb screws, which permit preciseness and scientific accuracy. It is a patented, revolving, three-cell frame with celluloid scale (having 5° graduation) on eyes.

The great improvement, however, is the comfort cable temples which are made like the regular AOCo comfort cable temples with the smooth tips, so comfortable behind the ears. These trial frames are



AOCo Trial Frame
No. 2387B

furnished in alumnico, and may be had from all jobbers carrying AOCo goods. Ask your jobber's salesman to show you a sample the next time he comes around. An inspection of this trial frame, however brief, will convince you of its many merits. These C.C. temples are now ready on our trial frames and an extra charge of 50 cents is all they cost.

Announcement of Plans for the Big Window Dressing a Idea Letter Contests of the Rice Leaders of the World Association

Of Interest to Every Optical Dealer in the Country

The Rice Leaders of the World Association, of which the American Optical Company is a member by invitation, and regarding which a special leaflet was inserted in the last issue of Amoptico, is beginning to make itself felt as a power in the business world.

On February 20th and 21st last, the officers of the various concerns forming this Association met in convention at the Waldorf Astoria Hotel, New York. In that brilliant assembly, including some of the finest business brains in America, plans affecting future policies of the Association were evolved and decided upon.

This important convention was the subject of unusual press comment throughout the country, and it is generally conceded that this unique Association, of which the American Optical Company is a member by invitation, is making history in the business annals of America.

Whilst the co-operative efforts of members of the Rice Leaders of the World Association will be directed towards maintaining and increasing the prestige enjoyed by them in the world's markets, at the same time, as has been announced in previous issues of Amoptico, plans directly affecting the sales of AOCo goods and products of other members of this Association have been inaugurated.

These plans will be laid before the public in May. They comprise an Idea Letter Contest, wherein the public may express ideas regarding the merits of AOCo and other products in letters not exceeding fifty words in length, which competition carries with it 3,500 prizes ranging from $1,000.00 down; and at the same time a Window Display Contest will be inaugurated all over the world among those dealers handling any of the products of members of the Rice Leaders of the World Association.

It is in the Dealers' Contest that you will be particularly interested. Contestants are not required to incur any expenditure in any way. It is simply a Window-dressing Competition, and the display will be made in accordance with the good taste of the contestant, from the goods he has in stock. This Window Display Contest carries with it 500 prizes, ranging from $2,000.00 down.

One of the conditions to be complied with is this: A banner carrying the emblem of the Association and full list of members, including the American Optical Company, must be displayed in every competing window. Otherwise the display will not be eligible.

These banners will be supplied by the Association upon receipt of an application from any dealer upon his own letter paper and signed by him, in which requisition he must state what member's products he proposes to display.

A distinct photograph of any size mus taken of the display, from which the effect ness of the window will be judged by ackn edged competent authorities on Window plays. It goes without saying that altho there are so many prizes, there will no sufficient for every contestant to receive a prize. Naturally, the best windows will but, although every contestant may not be tunate enough to win a cash prize, yet each every contestant will receive a handsome ackn edgment of his enterprise in entering the conte the shape of an album containing 100 photogra reproductions of the leading prize-winning Win Displays throughout the world.

In many instances such an album, which only be compiled through such plans as this A ciation has inaugurated, entailing an expenditu half a million dollars, will outweigh in impor to the recipient even a cash prize, for by stud such an album he will be in a position to make effective window displays in the future.

It is generally conceded that a Window Dis directly and advantageously affects sales. optical dealer thus having before him pictures re senting the best dressed windows in the world ca fail to render more efficient service to his custo through his window space, and incidentally b greater profit to his business.

You who handle products of the American Opt Company are cordially invited to take advanta this contest when it opens and capitalize in own interests the tremendous enthusiasm and p licity that it will occasion throughout the countr

It is interesting to note how these conte namely, the Idea Letter Contest and the Win Display Contest, interlock with each other. the most natural thing in the world that any pe entering the Idea Letter Contest, wishing to ga data upon which to base his letters, should look the AOCo goods he proposes to write about in window. He will enter your store, if AOCo goods displayed, to consult with you and learn the spe merits of AOCo products.

Could any arrangement be devised where effective opportunities for business could be off to you who sell "Fits-U" and other AOCo Opt Goods than to inaugurate such competitions wh will actually influence possible purchasers to e your store to inquire about the goods?

By this universally awakened interest the battle be half fought. It will require but tact and efficie upon your part to capitalize such inquiries and con sations with possible buyers and to cause the proc thereof to increase your business and bank acco

New Fits-U Luxe Eyeglass *New*

The Eyeglass with Fixed Lower Guards



Cat. No. O3121

NEVER, since the invention of fingerpiece eyeglasses by Jules Cottet in 1896, has so important an advance been made in eyeglass construction. The ordinary fingerpiece eyeglass, with the exception of a few minor improvements or modification, is to-day exactly the same structural device that was made originally by the American Optical Company under the Cottet patent *years* ago. Without belittling the importance of the improvements and patented features that have made the Fits-U famous—such as the AO-Washer, AO-Loop, Ovalex Spring, and the short P. D. Bridge—we can truthfully state that up to this time no real *basic* changes have been announced in any fingerpiece eyeglasses that the optical market has seen.

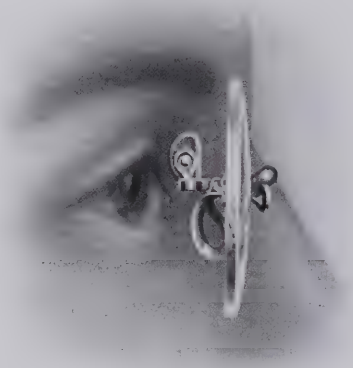
It is natural that the American Optical Company should bring about this great basic improvement that is now announced, not only because we have been pre-eminently the world leaders in fingerpiece eyeglass-making, but because we were first to develop the rigid bridge type and have been so largely responsible for its wonderful success—almost to the entire retirement of flexible spring eyeglasses from the market. It is natural, too, that this important construction should be identified with the Fits-U, for this eyeglass has enjoyed a larger sale than any other patented eyeglass ever marketed, its fame spreading to every civilized country in the world.

[*Continued on page following*]

Lower
Guards
Fixed

New Fits-U Lu

THE ***principle underlying the new Fits-U Luxe*** is an accepted theory in frame-fitting, employing the combination of two distinct ideas, both of great importance in the art of making glasses. The first idea is that the weight of an eyeglass or spectacle is most comfortably carried on the sides, and not on the bridge of the nose. The great success of what are called bearing-pad spectacle bridges in contra-distinction to the common spectacle bridge attests the soundness of this theory. This is readily understood when it is considered that side bearing-pads provide a greater bearing surface, distributing the weight without discomfort. The second idea is that the function of eyeglass guards is to prevent slipping or tilting forward and thus hold the glasses on with the least possible spring pressure; without also carrying the weight.



Fits-U Luxe Eyeglass will not tilt forward

It is ev
erence
that ou
fulfills
by pr
weight-ca
guard.
have be
thencefor
the prop
ensuring the correct a
as is possible with an
the importance of this
slight axial deviation
Not only is the angle
ters of the lenses cannot
absolute.



Moveable Upper Guards, closed

Cat. No. O3121 — ***No In***

Extensive manufacturing economies have
in cost over the former price for the regu
without departing in the slightest way fr
which the Fits-U is so favorably known.
are marketed to-day furnish a most attra
the great public satisfaction the Fits-U e

No. O3121 Fits-U Luxe Eyeglass Ovalex Spring	Mountir
1/10-12K Gold Filled, per dozen	$7.5
1/10-12K G. F. Fitting sets (1 doz. complete)	8.0
1/10-14K G. F. Amoptico line, per dozen . .	9.0

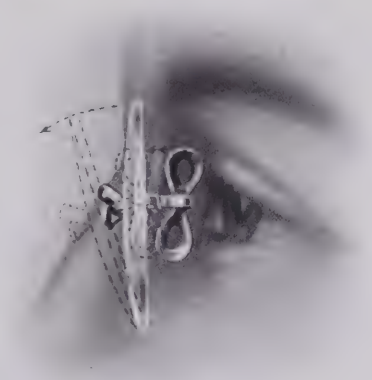
General Offices and
Factories at
Southbridge, Mass., U.S.A.

© American O

e Eyeglass *New*

Upper Guards Moveable

om a ref-
llustration
its-U Luxe
principle
a broad
ed lower pad
se fixed pads
d, they will
natically find
on the nose.
of the lenses, as accurately
if not more so. Consider
ent when it is known that
ended with serious results.
natically correct but the cen-
d: for the adjustment is rigid.



Ordinary Fingerpiece Eyeglass tends to fall forward

THESE adjustments relieve the moving guards of all but the simple function to which they are rightly applied; that of holding the glasses in place to prevent slipping or tilting forward. So slight is the effort necessary to do this work under such circumstances that the lightest of spring pressure, much less by far than that of any other form of eyeglass, will suffice; and the important increase in comfort to the wearer can be readily appreciated. By the employment of the most popular rocking-pad principle, with its independent adaptation to the AO-Loop arm, the greatest opportunity is given for a nicety in fitting, impossible where an entire guard must be adjusted. These pads constitute the only moving parts of the eyeglass performing an individual function.

[*Continued on page following*]

In Price

Cat. No. O3121

to offer this new Fits-U Luxe at no increase
Fits-U Eyeglass. It has been possible to do this
blished high standard of quality and finish for
ow that the favorable terms on which Fits-U's
ation from the viewpoint of profits, aside from

O3121 Fits-U Luxe Eyeglass Ovalex Spring	Mountings	Frames
10K Gold, per dozen	$16.50	$30.00
14K Gold, per dozen	24.50	42.00



Upper Guards open. Note fixed lower pad guards

ical Company

Branch Offices
New York San Francisco
Chicago London

New Fits-U Luxe Eyeglass *New*

The Eyeglass with Fixed Lower Guards

[*Continued*]

THE COMBINATION of these principles applied to Fits-U Eyeglasses provides an entirely novel structure on which we have acquired basic patents; so these features are now at the exclusive disposal of Fits-U users. This policy of improvement is one by which Fits-U dealers have profited for years, as successive improvements such as those mentioned above have been given first to the Fits-U.

It is with the greatest confidence that we predict the immediate success of the Fits-U Luxe eyeglass, for these seemingly radical departures from the present accepted type of finger-piece eyeglass are, in fact, logical and highly desirable.

The fixed and absolute adjustment of rigid parts now brings the science of eyeglass fitting to an exactness never before possible. It is significant to note, too, that this innovation does not displace the many proven advantages already possessed by the regular Fits-U. It adds no complications to assembling, measuring, fitting, or repairing. It is by no means a freak or fancy. If anything, it simplifies the individual problem of fitting in every case, and makes for surer and more satisfactory results.

It is almost needless to state that the development of this idea was not accomplished in a short time. It is the culmination of the efforts of experts who know, and whose experience is expressed in even the minutest detail of design and construction, after the most exhaustive and critical tests have been applied to the problem.

The Fits-U Luxe eyeglass takes the lead, establishing a distinctly new plane for itself in the realm of eyeglass-making, and occupying that place alone and undisputed.

Amoptico

Vol. III April, 1914 No. 1

Published Periodically by

American Optical Company

1833-1914

Channing M. Wells, President — Albert B. Wells, Treasurer

J. Cheney Wells, Vice-President and Secretary

General Offices and Works

Southbridge, Massachusetts, U. S. A.

New York . . . 15 Maiden Lane
Chicago . 122 S. Michigan Boulevard
San Francisco . . 140 Geary Street
London . 39, Hatton Garden, E. C.

Cable Address: AMOPTICO, Boston
Western Union Code used

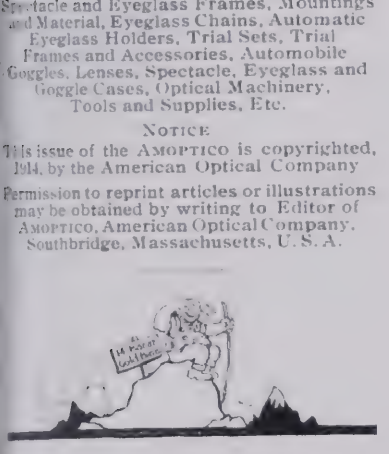
Manufacturers

Spectacle and Eyeglass Frames, Mountings and Material, Eyeglass Chains, Automatic Eyeglass Holders, Trial Sets, Trial Frames and Accessories, Automobile Goggles, Lenses, Spectacle, Eyeglass and Goggle Cases, Optical Machinery, Tools and Supplies, Etc.

NOTICE

This issue of the AMOPTICO is copyrighted, 1914, by the American Optical Company

Permission to reprint articles or illustrations may be obtained by writing to Editor of AMOPTICO, American Optical Company, Southbridge, Massachusetts, U. S. A.



THE late Professor James, of Harvard was the greatest authority on Philosophy and Psychology that this country has ever known; an original thinker in his field who stands supreme. One theory of his was that on whatever level a man may exist, he lives, works, and thinks on that level until some great force pushes him ahead to a more advanced level, where his efficiency is so much the greater.

The task before all of us is to persistently strive for the level above, resolving that we shall not be content to regard our thoughts, our actions, or our business as satisfactory until we have fulfilled our highest possibilities.

The American Optical Company is applying this thought in every department of its work, and we are constantly seeking ways of improving our goods. You, on your part, must do your best to raise the standard of your business.

Resolve to be a "solid gold" man. If you are now on the 12K gold-filled level, work up to the 14K filled level. If you have already reached that, strike out for the 10K solid gold level, and so on until you are on the 14K gold basis. You can pull your present customers with you, and add new ones as you go. It will mean more profits and greater mental satisfaction.



WHEN Johnny sneaks into the closet the night before Christmas to see what papa has brought home, that's inquisitiveness—and will probably lead to tears of protestation and a spanking—which only goes to show that inquisitiveness can very easily be used at the wrong time and in the wrong place. When Johnny, senior, who is an optometrist, investigates the quality of the gold-filled specs and eyeglasses he buys of his jobbers, that's inquisitiveness again; only this time we don't call it by that name. We call it caution. Which simply proves that inquisitiveness turned in the right direction is a mighty handy thing to have.

American Optical Company welcomes the right kind of inquisitiveness on its gold-filled goods. We make them honest all through and label them to show the quality they actually are—not what they ought to be. If you like to handle such goods, just ask for the kind that bear the AOCo stamp.



YOU would not go into a shoe store and ask for 1½ pounds of cheese, would you? Or into a clothing store and try to buy an aquarium?

The chances are you would ask for shoes in the shoe store and clothes in the clothing store. And you do that because you know they carry what you want!

No man will go into an Optometrist's store and ask for goods which he does not think he can find there. And if he does not *know* that you carry goggles, or chains and reels, or Amoptiscopes or any one of the dozens of things which are included in your stock, he won't ask for them.

Advertise! Show your stock. A dozen spectacle cases stuck in a corner where they can't be seen are just as bad as taking the money they represent and throwing it away. Let the people know what a variety of goods you carry and *then* they will ask for them, not before.

"Advertisements As Is"

"$2.00 Eyeglass Sale to-morrow all day and evening until 9 p. m. with my best 14 K gold-filled nose piece and my best Torid Lens, all fitted to the eye."

Hot Stuff! As the correspondent who sent this advertisement to us noted on the margin opposite the word "Torid." Of course we do not wish to appear to insinuate that such an advertisement might ever be printed above your own name and address. We simply wish to call attention to the necessity of viewing advertising as a serious undertaking not to be begun unless you are prepared to give it your full attention.

Bridgeton, N. J.

"I am just in receipt of your very handsome catalogue, for which please accept my best thanks. It is certainly a wonderful publication and I will take great pleasure in referring to it frequently."

F. G. Stieren, O. D.



Uni-Bifo LUXE Bifocals

PATENTED. TRADE-MARK REGISTERED

A Triumph of Modern Onepiece Bifocal Lens Grinding

Almost from the very conception of bifocal lenses a well defined purpose has been kept in view by the manufacturers and others interested in the development of ophthalmic science, looking towards the production of a practical bifocal lens having true ophthalmic values and consisting of a solid piece of crown glass with the two lenses ground invisibly on its surface.

Most ingenious methods were devised from time to time in these attempts and many patents have been granted, but the lenses produced have been neither accurate nor commercially profitable. These results were crude, and even far less satisfactory from an ophthalmic viewpoint than the common forms of cemented bifocals so generally used. The difficulties encountered were of a purely mechanical nature which it seemed well-nigh impossible to overcome. There did not appear to be any process devised which would do away with such glaring defects as (a) imperfect spherical surfaces, (b) well defined neutral "zones" having disagreeable prismatic effects between foci, (c) deep grinding and polishing scratches or grooves.

Having long realized that the successful accomplishment of this long sought object would give to the world a bifocal lens so distinctly superior as to be literally in a class alone, we have watched with interest the experiments of others, in addition to devoting much time and great expense to experimental work in our own organization.

The first indication of a successful attempt to make a practical one-piece lens came to us in 1909 from England, where experiments had been carried on under scientific conditions employing specially devised machinery. The inventors of this machinery were about to place upon the market the results of their efforts, which are now generally known throughout the optical trade in Europe as Uni-Bifo. and "Luxe" Lenses. They had developed a grinding and polishing process which seemed to produce well-defined and accurate curves. Keenly alive to the value of such progress in the lens grinding art, we at once investigated, with the result that negotiations were effected by which we secured American patent rights. Experts from our scientific staff were dispatched to England forthwith for the purpose of studying machinery and methods, that the best ideas might be applied to the development work we were then carrying on.

In the meantime, important United States patents were obtained on methods of making one-piece bifocals and on the lenses. Further investigation showed that these patents really held the key to the problem as we believed it must be worked out for the great American market.

Under these patents we secured a manufacturing license; so the way was at last cleared for rapid progress under most favorable auspices. We are, therefore, operating along the line of greatest experien under the protection of strong patents not only processes for producing LUXE bifocals but on blanks and lenses as well.

A most complete merchandising plan has b worked out under which these lenses are sold, givi an opportunity for favorable profits to each bran of the trade.

Briefly, this plan provides for the issuance what are called "Finishing Licenses" upon t payment of a stipulated royalty to the owne of the patents entitling the licensee to purcha blanks at the maximum discounts, for finishi (that is, surfacing, edging, drilling, and mountin for re-sale. Obviously, the securing of a license w appeal at once to all users of high-grade bifoca who are thus enabled to earn a satisfactory pro upon their license investment, as well as a go profit as a merchandising proposition. To put t matter in more concrete form; anyone whose b ness will consume an average of one pair or mo of LUXE bifocals per day may profit very han somely by operating under a finishing license, t the inducements are most attractive.

On the other hand, the dealer who buys one-pie lenses from a finishing licensee may realize a bett return on every sale than is usual to-day upon a bifocal on the market. As the dealer whose sa average but one pair of these lenses per day m realize an attractive profit on a license investme so the attractiveness of the proposition is amplifi directly as the sale.

Uni-Bifo LUXE lenses have the near and d tance spherical curves ground on the "bifoca or inner side of a single piece of clear crown glass index 1.523 in toric form. From long experience a a close study of trade demands, it has been decided confine the regular forms of this lens to two stock si of reading portions for the present, although spec sizes may now be made to order.

Blank B., 47 mm., round; with 19mm. full circu reading portion.

Blank E., 49 x 38 mm., oval; with 30 x 15 m semicircular reading portion.

These sizes are to be known as regular, and a both listed at the same prices, giving a choice two sizes of reading addition, which is a most i portant advantage.

The sizes of the uncut blanks themselves have be selected with a view to including the entire range lens sizes usually called for in modern prescripti work. In thickness, the blanks average appro mately 3.5 mm. It must be remembered, howev that one side of the lens is already finished, the thi ness being sufficient to permit of grinding all us combinations, including strong cylinders and pris

A LUXE blank only 3.5 mm. thick may be surfaced quickly, effecting an important saving in time and labor.

The reading portion of the LUXE bifocal lens lies *outside* the inner curve of the distance portion, so the distance part of the blank may be surfaced extremely thin, making the lenses light and handsome.

Uni-Bifo LUXE lenses, being made of a solid blank of crown glass with two lenses ground invisibly on its surface, have some very conspicuous advantages not possessed by any bifocals which are made by combining two pieces of glass as two separate lenses, one adjacent to the other, as a cemented or fused combination one upon the other.

Technically speaking, and, in fact, from the viewpoint of ophthalmic result, the old Franklin (split) and Perfection Bifocals were the best form that could be worn, for the very good reason that the wearer looked through a simple lens—a single piece of glass—when reading. Of course, in consideration of their unsatisfactory appearance and the annoyance of the prominent edges, they were much less to be desired than the later forms.

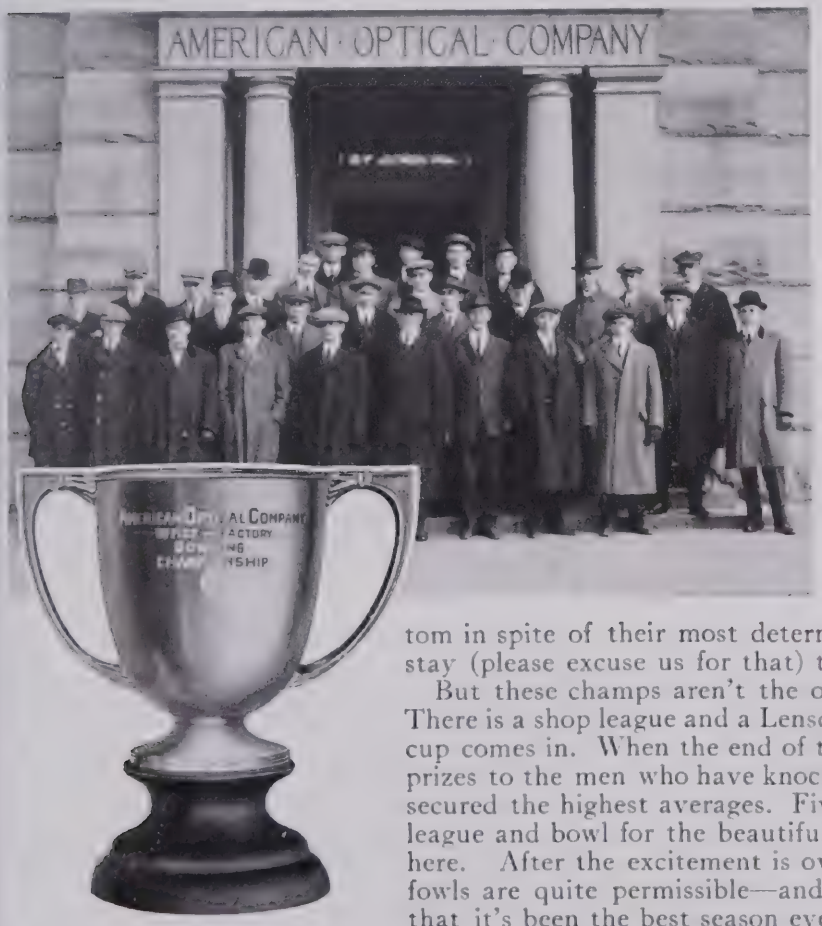
The Uni-Bifo. LUXE lens overcomes all the disadvantages that have been raised to all forms of bifocal lenses. To understand this broad statement it is merely necessary to consider the following qualities:

1. Absolutely no chromatic aberration.
2. Invisibility.
3. Thinner than any other bifocal forms.
4. Two sizes of reading portion available.
5. One side only to be surfaced.
6. A hard surface of crown glass to resist scratching.

New Westminster, B. C.

"Your general catalogue reached us in perfect condition. We are extremely delighted with it and feel sure it will be a great help to us in many ways. AMOPTICO also comes, which we eagerly read. Please accept our many thanks for your kindness and prompt attention to our requests."

Ury & Bewley.



A Snappy Bunch of Bowlers

Aren't they handsome? Look at 'em! Probably the most proficient bunch of bowling prodigies ever gathered together in one place. They're all members of the Office Bowling League, six teams of them. Listen to the names: Fits-U, Smart Set, Best Yet, Wilsta, Vici, and Ovalex.

'S' funny what's in a name, isn't it? The Best Yets proceeded to justify their name at the very beginning of the season by jumping into the lead, and though each team has time after time tried to bowl them off their pins none has yet been able to hold a candle to them when it comes to garnering in the necessary points to win. The poor Wilstas, also determined to stick by their cognomen, have stuck to the bottom in spite of their most determined efforts. The chances are they will stay (please excuse us for that) there till the end of the season.

But these champs aren't the only ones of which the AOCo can boast. There is a shop league and a Lensdale league, as well—and that's where the cup comes in. When the end of the season arrives, each league distributes prizes to the men who have knocked over the greatest number of pins and secured the highest averages. Five men are then chosen to represent each league and bowl for the beautiful cup presented by the AOCo, illustrated here. After the excitement is over, each league holds a banquet—where fowls are quite permissible—and everybody goes bowling home, vowing that it's been the best season ever.

Chicago, Ill.

"I want to tell you that I like the new Fits-U Ovalex so much that I am discontinuing the other fingerpiece mountings I have been carrying."

Lichtenstein Bros.

San Luis Obispo, Cal.

"The use of your cuts and slides has materially aided in an increased business last year and I am looking forward to a similar increase through the same medium this year. I trust your already great business will show a greater volume this new year we are just entering."

Dr. H. A. Gowman.

"The copy of the catalogue has come to hand, for which please accept my thanks. At the outset I can truthfully say that it is the finest work of its kind I have ever seen. The illustrations are not only unusually 'true to life,' but very beautiful in design, and show the goods in the best possible way. Refinement and good taste, too, are always in evidence."

Arthur H. Wiseman (with A. J. Lloyd Co.).

Hartford, Ct.

"We are sending you a clipping in which this ad. has been running. At the same time we wish to thank you for this cut."

Edw. J. Brown.

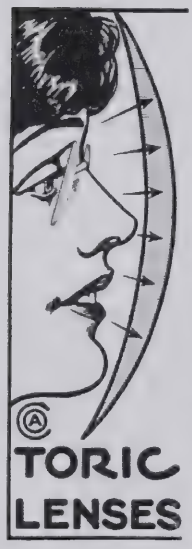


SELLING *the* GOODS



In addition to the advertising helps illustrated here, the AOCo places at your command the assistance of free supplies of newspaper electros, imprinted blotters, car cards, lantern slides, etc. It is worth while to sell AOCo goods merely for the sake of being able to apply these helps to your business.

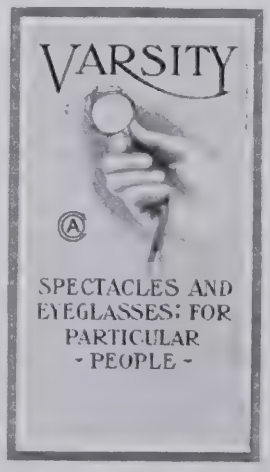
It May Be Little, But Oh! My!



AOCo Electro No. A26

It isn't always the biggest things that make the greatest flutter you know. Last December we published an announcement about two newspaper electros advertising toric lenses and the instant demand which arose showed how widespread the interest in these lenses was. Those were pretty large cuts, though (nos. AA18 double column and A23 single column), and were perhaps too large for many of our friends. But this cunnin' li'l feller certainly cannot be accused of taking up too much room. With each electro that we send, free, by the way, is a sheet containing a series of six changes of copy. All you have to do is to send cut and copy to your printer and tell him to go ahead. We are all ready for the flutter of requests we know we shall receive for this cut, and will gladly send it to you.

"Varsity Spectacles and Eyeglasses for Particular People."

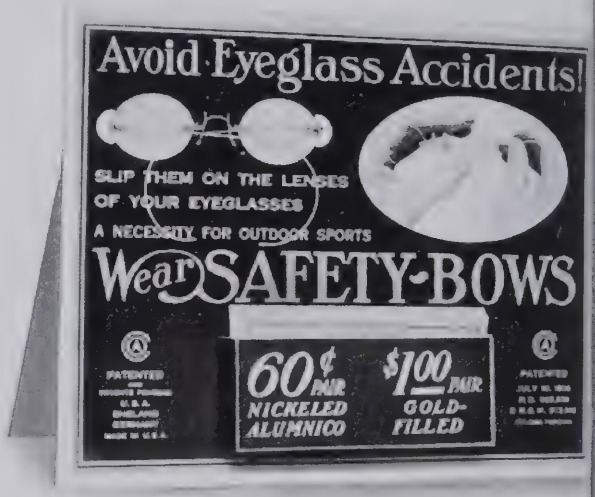


This is the title of a beautiful little leaflet we have just completed, designed to help you who handle AOCo Varsities to sell them. We have spared no expense in arranging it, for we know that the persons to whom the goods themselves appeal are particularly sensitive to good taste, both as regards the spectacles or eyeglasses and the way in which they are presented.

A supply of these four-page leaflets, with your own name and address printed on the back page will be sent free to any optometrist or optician who handles AOCo Varsity goods. It will be worth your while to sell the AOCo line and use these circulars.

Display Your Safety Bows With This Demonstration Sign

Have you read about the new patented AO Safety bows illustrated and described on page of this issue? We hope you already have order pad in front of you and are prepared to along an order for them to your jobber, for y surely see their advantages and the chances th offer for a good profit. Here we are showing



AOCo Show Case Sign No. 4W1

demonstration show case sign to help you sell th safety bows. A pair of them can be attach directly to the card and a container at the bott will hold an additional supply. Your custom have a complete story of the goods before them their uses, their price and their quality.

This little silent demonstrating salesman will n make you dig in your pocket to pay his sala at the end of each week. All he asks is a chance sit in a prominent place and with his orange a black colors flag the attention of the people w pass him.

When you have sent an order to your jobber a supply of AOCo patented safety bows, be sure y get one of these little silent salesman signs. He w be sent to you free with every dozen you buy.

Scientific *and* Experimental Department



If to make eyeglasses, spectacles and other optical goods were a mere matter of mechanical processes of accepting raw material at one end of our plant and turning it out at the other in the form of finished goods, how simple it all would be. Business *might* be conducted in that way, and the various eyeglass and spectacle parts sent flying through the factory in a kind of scrambled egg form, trusting to luck that the goods would be satisfactory. But it would not be done for long.

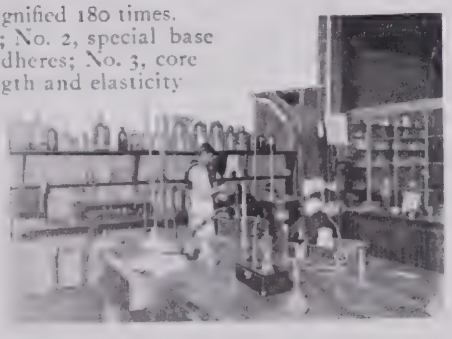
Our scientific department is one of the many checks we keep on the quality of the materials we use. Two expert metallurgists and chemists, with an assistant, are kept constantly at work, following the huge quantities of raw material which are purchased daily, analyzing and testing. And it is truly astonishing to talk with them about their work and learn of the variety of materials which are submitted to them.



Gold-filled stock, magnified 180 times. No. 1, strip of 14K gold; No. 2, special base metal to which gold adheres; No. 3, core of metal giving strength and elasticity



All kinds of glass, rouge, etc., are tested here



We make an analysis of all materials used

Not long ago, we received a large shipment of glass which was to be used in lens work. Of course, specifications had previously been stipulated and agreed upon, so that we had every reason to believe we were justified in proceeding to use it at once. Samples of the shipment were sent to the scientific department to go through the formality of testing. But the chemist said: "Stop—don't use that glass. Its index of refraction is not right!" The great glass works from which this stock was imported protested, but in vain. For we had the latest and most scientific instrument, made especially for that sort of work, capable of determining the refractive index to the 6th decimal place, and this instrument had shown up its true density beyond any question. The glass was not accepted for the work, and our standard was maintained.

Every year samples of thousands of pounds of *soap* are tested—such as is used in washing lenses. Trivial as this may seem, it is, nevertheless a most important operation, for soap of a wrong chemical structure will attack the delicate polished surfaces of a lens and render it almost unfit for use.

Rouge, Emery, Corundum, abrasive agents of all descriptions, must first pass a test before being accepted as fit for use. A rouge for example, which contains any amount of silica (quartz) might severely scratch the lenses during the polishing process, and be quite unfit for use.

The testing of the metals used is another vital point—in some ways the most important of all. Not only is it necessary to test the metal used directly in eyeglass frames, but the machines used in its manufacture must frequently have attention. For example, some time ago one of the dies used in reducing gold-filled wire failed to work properly. It was taken to the scientific department, and the analysis showed that, owing to improper structure, it would be impossible to correct the defect. So the die was destroyed and a perfect one took its place, thus saving a large expense due to manufacturing imperfect stock.



The photograph of gold-filled stock, enlarged 180 times which we show here, is interesting in that it shows how well equipped we are to see that only perfect gold-filled stock is placed on the market under the AOCo trade-mark. By means of an

exceedingly delicate instrument known as a micro camera, samples of our gold-filled stock are examined. The light line which shows so clearly is the shell of gold as it appears to the camera. Note how even it is in spite of the magnification. The darker section is the base metal core.

This micro camera furnishes a constant check on quality and structure of the goods we produce, and simply an example of the care we take to protect interests. We believe that this care will be re many times by the better quality of goods we ma facture and the greater satisfaction they will give

Southbridge to the Front Again

Not in war, of course, for we're a very law abiding community and prefer making eyeglasses to chopping off heads for a living, but in dancing. After the firemen's ball we told you about last month, the stenographers called a close meeting (no one but stenogs allowed) and the result was a dance that rivalled that of the firemen. We're not quite sure about the translation of the gum-arabic looking sentence that appears below the picture of the poster used to advertise the affair, but one fair young damsel whispered that it read "Come on up—we'll all be there." At any rate everybody did go, and it was "some soirée." Quite *au fait*, *pomme de terre*, et cetera, as the Parisiennes would doubtless say. We hope that you'll all keep the invitation in mind and use it—next year.



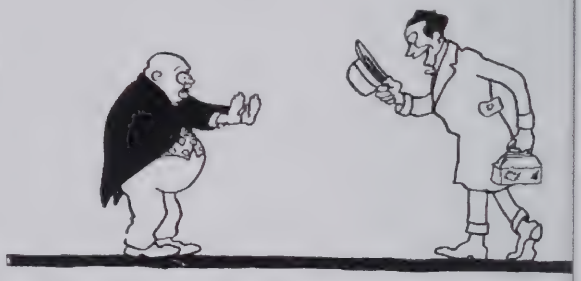
Ideas Worth Knowing

One enterprising optician down south has hit upon the expedient of placing some of the imprinted Fits-U Blotters, with which we supplied him, on the desks of the hotels of his town. By keeping these handy in this way he not only reaches many of the centers where his own towns folk congregate, but reaches a large floating population as well. We pass the suggestion on to you. Possibly you can use it.



DOCTOR: There's nothing but a cinder in your eye.
PAT(IENT): Faith, I think 'tis a clinker or a sidewalk brick.
—*Scribner's*

AOCo Traveling, Dress Suit, and Folding Style Trial Sets



A shabby Trial Set can undo the best efforts of t brightest traveling Optometrist. It may prejudice a po sible patient before a word has been spoken.

AOCo Trial Sets are made in all desirable sizes and hav the stamp of honest construction and careful workmans ship. Removable tray for interchangeable lenses, holdi one gross pairs. Space provided underneath tray for stock Cases covered with special quality heavy black sealgr leather. Tan sole leather supplied if desired.

Don't prejudice your patient. Buy a new up-to-dat AOCo Trial Set. It will help your sales and give added confidence.

Full particulars from your jobber. Write to-day.



It frequently happens that optometrists and opticians fin necessary to send glasses to their patients. by mail, rather tha hold them until called for. Here is an idea in connection with mailing that is well worth knowing. Place in the box with glasses a printed label addressed to yourself, that is large eno to be stuck over, and entirely cover the top and both ends of box used to send the parcel to your patient. Also put in box a card, with room for remarks and complete directions remailing the box to your address. Then when the patient fi it desirable to return the glasses for further adjustments and pairs, all that is necessary is for him or her to use the box label already prepared, and follow your own shipping directi In this way you can insure the work being returned to you ra than to some other optometrist or optician.



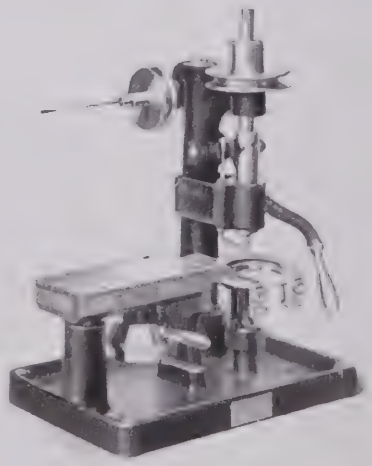
MATERIALS + SKILL + EXPERIENCE

The best material in the world cannot be converted into an efficient optical machine unless manipulated under the guidance of master workmen thoroughly acquainted with optical trade requirements. Nor can experience alone, or skill, guarantee satisfaction to users of optical machinery, unless this skill and experience is given the best of material on which to work.

It is only when perfect material is placed in the hands of men with utmost skill and long experience in optical work that a perfect result can be guaranteed.

AOCo OPTICAL MACHINERY

is the product of such factors. Only those materials best suited to the work in hand are used, and the entire process of manufacture is left to skillful machinists whose long acquaintance with the work has made them able to gauge the accuracy of their product to an astonishingly fine degree. *You* must have machines made by men who know and understand your problems. Your drills must always work true; your edge grinder must give you exactly the shape you expect; your surfacing machine must always be relied upon. In short, your machinery must inspire you with perfect confidence.



American Optical Company machinery will justify your full confidence. Write to your jobber for a catalogue and full particulars.









When you sell Fits-U Eyeglasses you receive the benefit of a national advertising campaign that is continually influencing the choice of your customers in favor of these well-known goods.

If you do *not* sell Fits-U Eyeglasses, you are deliberately fighting against the rising flood of publicity this advertising creates. Why try to buck the tide? *Swim with it.* Rise to a bigger business by taking advantage of your customers' preference for Fits-U Eyeglasses.

Amoptico

Published by the American Optical Company
at Southbridge Massachusetts

Vol. 3 May, 1914 No. II



ens Number

AOCo
KRYPTOK BLANKS

A superior quality of lenses can only be produced when every factor connected with their production is superior. Reliability in Kryptok lenses can only be guaranteed when the men, machines and methods which make them are reliable.

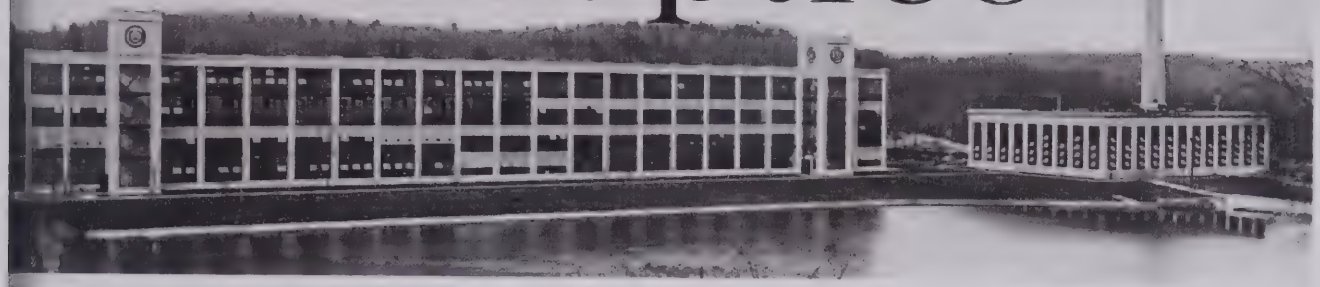
The American Optical Company guarantees AOCo Kryptok blanks because the organization which produces them has proved itself thoroughly reliable through many years of experience.

Every blank is tested and approved before being sent to your jobber and he has the AOCo guarantee of its superior quality.

Ask your jobber to grind your Kryptok lenses from AOCo blanks. You will be perfectly sure of satisfactory results.



Amoptico



Talks with the Practical Optician

Practical Points on AOCo Abrasives

In order that the manufacture of lenses may be carried on economically and rapidly the use of the best possible abrasive is absolutely imperative. The grinding process was formerly done with sand, and if time had been no object its use would have been fairly satisfactory. It cuts rapidly at the start, owing to the physical formation of its grains or crystals, although being but slightly harder than the glass itself it breaks down rapidly and requires constant renewal. It is still used on some lines of glass grinding where it can be shoveled on in large quantities, but for spectacle lenses, in this country at least, its use has long since been discontinued.

The next step forward in lens grinding was taken when emery was substituted for sand. This material is a more or less impure oxide of Aluminum, the impurities being iron and other metallic oxides combined both mechanically and chemically. It occurs as a granular or massive dark colored substance, looking very much like iron ore and in fact may be more properly regarded as a rock than as a definite mineral. Its hardness is from 8 to 9, according to its purity; the hardness of quartz being 7, that of corundum being 9 and that of the diamond 10. In its purest form, when from 90% to 95% Aluminum oxide, it is called corundum.

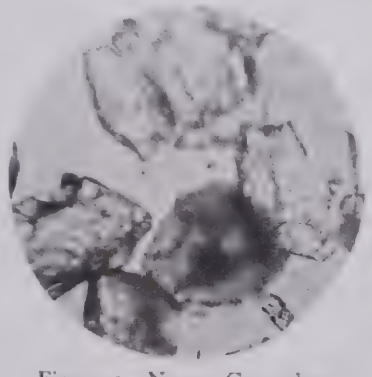


Figure 1. No. 70 Corundum, magnified 75 diameters

Emery varies very much also in its physical structure, and as its abrasive power depends as much upon its physical as its chemical properties, it can be readily seen that unless great care is used in selecting it, the results consequent upon its use are bound to be uncertain. Lens manufacturers, therefore, have taken great precautions to procure emery which is taken from the same mine to ensure its running as uniform as possible. In spite of the utmost precautions, however, great variations occur in the quality of the grinding directly traceable to variations in the emery.

As before stated, there occurs a form of Aluminum oxide much purer than emery, called Corundum.

With the idea in view of securing a much more uniform abrasive than emery, the AOCo several years ago began using corundum. It was difficult at first to make the lens grinders take kindly to the change, as the notion prevailed that a certain amount of *dirt* was necessary to hold the emery in place on the grinding tool. If this theory had been correct, then there could have been no doubt that emery filled the bill, as it contained 25 to 35% impurities or *dirt*. Experience, however, proved that *dirt* was not necessary to grind glass, and that by using a finer grade for finishing than was necessary with the soft and *dirty* emery splendid results could be obtained. Because of these facts the use of emery was discontinued and corundum substituted, making as long a step forward as that from sand to emery.

The benefits derived from this change are not confined to the AOCo factory, however, as AOCo M 302, M 302½, M 303 and M 303½ are now composed of corundum altogether although still designated as "emery" as a trade term, thus giving our customers the benefit of the change. AOCo M 302 is intended simply as a smoothing emery to grind out the rough pits left by the AOCo M 301 or roughing emery. Not less than ⅕ mm. should be removed by AOCo M 302. AOCo M 303 is intended to be used after AOCo M 302 as a finishing emery, and as it is extremely fine, great care must be used not to use too much pressure or to run the emery too black or dead, as the lens is thus almost sure to rub on the iron and tear deep grooves in its surface which resemble scratches caused by coarse emery. On this account AOCo M 303 emery is sometimes condemned as being gritty, when the real cause of the trouble is either too great pressure or running the emery too dead or else too dry.

It sometimes happens that a can of AOCo M 303

smoothing emery is returned to us from a customer with the statement that the shopmen have complained of its scratching. In every case the material returned is subjected to a very thorough test in our hand-surfacing department and in our laboratory. Occasionally we find coarse grains in the fine emery returned, and when this happens we find that the emery has been mixed with water and is lumpy. We have accounted for the coarse grains in the following way:

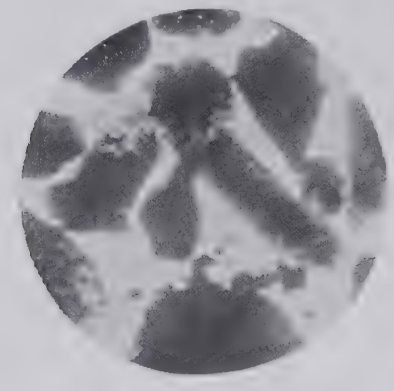


Figure 2. No. 70 Emery, magnified 75 diameters

It is customary with some shopmen to have their cans of AOCo M 303 smoothing emery on the bench beside them. In fining, the operator dips his finger in water and then dips it into the can of fine emery, feeding this emery onto the lap. This is a practice to be deprecated, as there is danger of conveying grit and coarse emery into the can containing the finer grade. The safer and more economical practice is to pour out a small portion of the fine emery into a suitable flat pan, and when this is used up pour out another portion. In the interim, the cover should remain on the can.

Extraordinary care is used in manufacturing this AOCo M 303 finishing emery to obviate the danger of any foreign matter's becoming mixed with it, and if these precautions are taken by the shopmen there should be absolutely no loss from scratches.

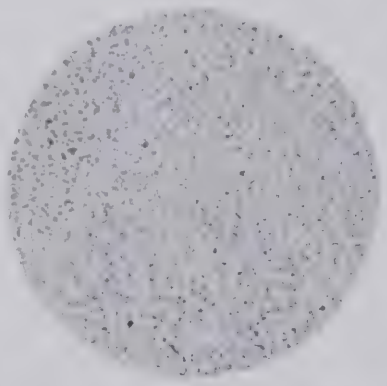


Figure 3. AOCo No. M302½, magnified 75 diameters

For those who insist on a more rapid cutting emery than AOCo M 303 we furnish AOCo M 302½ finishing emery. This grade will stand more pressure than AOCo M 303 and cuts considerably faster. It must be worked down more at the end of the finishing process. In other words, it must be run dead. While the AOCo M 302½ can be used directly after roughing, we do not recommend it, but advise always using AOCo M 302 for smoothing preparatory to the finishing process. This not only saves time and ensures better work but conserves the more expensive AOCo M 302½ or AOCo M 303 finishing emeries.

The AOCo M 303½ grade mentioned above is a special grade of emery which is prepared particularly for microscope and camera lens work. This grade, as well as AOCo M 303, is sought for by the most noted scientific instrument makers of Europe, who pronounce it better than they have been able to procure elsewhere or to grade themselves.

The reasons for this superiority are due partly to AOCo methods in selecting materials, partly to processes in grinding, by which the little crys corundum are robbed of their sharp jagged and perhaps most important of all, the car skill used in grading.

Corundum runs, as stated, from 90% to Aluminum oxide. It is the work of the che the AOCo chemical laboratory to analyze each ment and see that the material is sufficiently Aluminum oxide. This is not all, howev corundum from some localities often contains percentage of Amorphous Aluminum Oxide. latter is to corundum what charcoal is t diamond. It is non-crystalline and therefore abrasive. It is the duty of the AOCo metallu with his microscope and micro-photographic ratus, to examine the material for this defect. are thus insured pure materials to start with.

The accompanying illustrations showing photographs will be of interest as showing physical structure and relative sizes of di grades of emery or corundum.

Fig. No. 1 is No. 70 corundum magnifie diameters. Note the transparency of the cr also the clean, sharp cutting

Fig. 2 is No. 70 emery of the grade magnified 75 diameters. that the grains are so full of dirt be absolutely opaque—over 30 purities which do no effective Note also the absence of clean, cutting edges.

Fig. 3 is AOCo M 302½ fini emery magnified 75 diameters. the freedom from dirt, also the a of any amorphous or non-crys material. Every grain clear as cr

Fig. 4 is AOCo M 303 fini emery magnified 75 diameters. that the grains are a trifle smaller Fig. 3. Note also the differenc tween the jagged cutting points o 1 and the smoothly rounded grains of Figs. 3 a This difference explains at once why the emery ufacturers are unable to produce a suitable finishing emery that will not scratch. Emery manufacturers crush their emery or corundum to obtain the different grades. Hence the grains have jagged edges and sharp corners which are bound to scratch. The smoothing and finishing grades of emery supplied by the AOCo have the sharp corners rounded off.

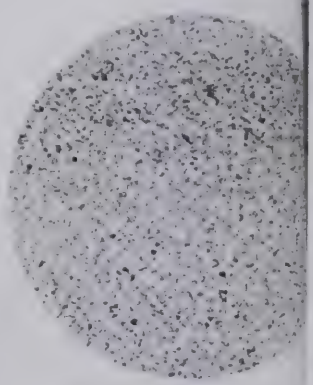


Figure 4. AOCo No. M3 magnified 75 diameters

Some shop men are accustomed to use FF eme smoothing, as supplied by emery manufacturers account of the crushing process by which it is pr

Note: When AOCo M301 roughing emery is ordered, we regularly furnish emery of the best grade obtainable. We can, however supply corundum if specified, but owing to the fact that this material is much more expensive than ordinary emery, an extra price will be charged.

is bound to scratch, and these scratches must be ground out by the finishing emery. Thus, in order to save a few cents a pound for smoothing emery, valuable time and expensive finishing emery are wasted.

Fig. 5 shows human hair magnified 75 diameters. This will give a comparative idea of the extreme fineness of finishing emery. The average hair measures 3½ thousandths of an inch or closely ⅒ mm. AOCo M 302½ finishing emery grains measure closely 1/100 mm. in diameter, AOCo M 303 finishing emery measures 1/1000 mm. and AOCo M 303½ about 5/1000 mm., so that the average finishing emery for prescription grinding measures ⅒ the diameter of a hair. The methods by which these fine grades of emery or rather corundum are graded in the AOCo plant are marvelous, and they have been perfected to such an extent that we have no hesitation in pronouncing AOCo M 301, M 302, M 302½ and M 303 emeries the best in the world for ophthalmic lens work.

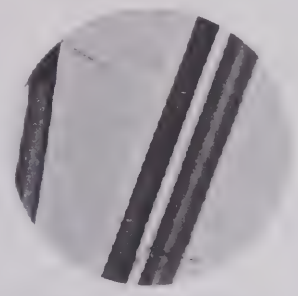


Figure 5. Human Hair magnified 75 diameters

If you do lens surface grinding and have not already tried them, send for samples. If you have tried them and have not obtained the results expected, send for advice. Send for our "Handbook of Surface Grinding." It contains valuable information in regard to the use of emery.

Our new "Talks With the Practical Optician" also contains a lot of valuable information to the surface grinder. Both are yours for the asking.

—*L. W. Bugbee.*

Are You Selling Zyloware Spectacles?

The rage for Zyloware Spectacles still continues, and more people than ever now look like scholars—or whatever you may care to call them—as they walk down the street with their faces disguised by the big imitation shell glasses. It's up to you to take advantage of the demand for them.

The AOCo zyloware line contains new and original styles, made of a special stock selected particularly for its superior colors, resilience, and the property it has of taking a handsome finish. Each frame is made with a thorough knowledge of optical requirements, and the result is shown in its perfect proportions and shape. Bridges are angled at forty-five degrees. Angular endpieces (for reading) or split endpieces will be supplied when definitely specified in orders. Unless otherwise ordered we regularly furnish assorted P. D.'s and 40 mm. eyes.

Your jobber will supply you with AOCo zyloware spectacles at the following prices. Look for the fine gold AOCo monogram on the back of the left end piece.

Curved Temple Frames Cat. No.	*Straight Temple Frames Cat. No.*	*Color*	*Trade Price Per Doz.*
R117	R113	Dark Shell	$7.50
R127	R123	Black	7.50
R137	R133	Amber	8.50
R147	R143	Light Shell	10.00
R157	R153	Crystal	8.50

Eye sizes 38 mm., 40 mm., 42 mm.

Pupilary distances 58 mm., 60 mm., 65 mm., 68 mm.

The Biggest Reference Book of Optical Supplies Ever Published

Every dealer entitled to one copy. Have you sent for yours?

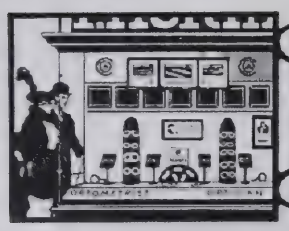
Three hundred and fifty pages of illustrations and reading matter, printed in two colors on the finest grade of coated paper and bound in heavy cloth covers. These are the physical characteristics of the AOCo general catalogue.

An unequalled reference work of Optical supplies embracing almost every line of interest to dealers, from solid gold Varsity Eyeglasses to the smallest tools used in an up-to-date prescription shop. There you have the contents.

The value of the contents? It's up to you. One of these splendid books will be sent to you if you will write in to us on your business letterhead, or enclose your business card. Others are now finding them almost indispensable in their work, and you cannot realize how much its possession will mean to you until you actually have it and see how wide its scope is. Don't delay about writing for your copy.



"I have cut out using any nose piece but the Fits-U and cannot speak highly enough of it. Of all the many nose pieces that I have tried to handle in the past the Fits-U's will stand more wear and tear, need less adjusting. When once adjusted they will stay.—Dr John A. Presper, Philadelphia, Pa.



NEW GOODS *for* *up-to-date* DEALERS



Fits-U Luxe: The Eyeglass with Fixed Lower Guards

With the announcement of the New Fits-U Luxe eyeglass the American Optical Company takes another forward step in the development of comfort in eyeglass wear which is particularly significant. Ever since the conception of the fingerpiece idea in



Illustration of Fits-U Luxe with Upper Guards Held Open

1896 by Cottet, manufacturers have been working to develop this principle to its highest efficiency and usefulness, but until the announcement of the Fits-U Luxe, whatever changes have been made in the original idea have been a development of that idea rather than changes in it. Throughout the eighteen years of this experimental work, the American Optical Company has continually taken the lead, with such improvements as the AO-Loop, allowing universal adjustment of guards, the AO-Washer (patented) and the Ovalex spring. The new construction does not in any way belittle previous improvements. In fact, practically all of them are embodied in the Fits-U Luxe. But in this case we have taken another stride forward which places our new product in a class without competitors.

The principle involved in fingerpiece eyeglasses is that a firm hold of the nose shall be secured by guards controlled by a spring action just sufficient to prevent slipping of the glasses under all ordinary conditions of use. But heretofore a function has been forced onto this spring which, theoretically speaking, it should never have been called upo assume. That is, the spring has had to press nose with such tension as to enable it to suppor *weight* of the eyeglasses. With the new Fits-U eyeglass (patented) the spring does not hav support this weight.

The basic difference in the construction of Fits-U Luxe lies in the fact that the upper gu and lower bearing pads are entirely indepen of each other. The upper guards, made with ro pads, are controlled by fingerpieces and the po Ovalex spring as in previous models. But the l bearing pads are firmly fixed to the shank of bridge and are made of malleable metal w enables the fitter to adjust them permanentl the nose. In this way the weight of the glass distributed evenly and widely on the sides of the as it should be, thus relieving the upper guards spring from the necessity of supporting this wei

Furthermore, the fitter is assured that the glasses will always be placed in the exactly cor



Fits-U Luxe, Showing Spring Pressure Released an Upper Guards Closed

position, with lenses in proper alignment befor eyes, a feature which is extremely important, which is not properly realized in other styl eyeglasses.

The adjustment of the upper guards is then a simple matter, it being only necessary to ben

O-Loops until the pads rest against the nose with sufficient pressure to prevent the glasses from ping forward. Naturally, a very slight pressure adequate for this purpose, as compared with the ich stronger pressure which was previously essary.

Care should be taken when fitting the new Fits-U xe eyeglass to select the proper size of bridge in der that the lower bearing pads may rest comrtably. A perfect adjustment of these pads may en be easily secured.

Fits-U Luxe eyeglasses are made in both gold d gold-filled according to the qualities listed ow. We are glad to say that through the extenve manufacturing economies we have affected and reason of the very large production of these goods that there will be no increase in prices above those previously charged for the regular Ovalex Fits-U.

Please bear in mind that the Fits-U Luxe is sold all over the country, and will very soon become known as the *one superior eyeglass*. Already there are more Fits-U's sold than any other makes of fingerpiece eyeglasses, and this new construction will add immensely to its popularity and distribution. We advise you to get in touch with your jobber about these goods at once, and place your first order. There will be no need of *urging* you to repeat your order later. Don't delay. Here are the prices:

No. 03121 Fits-U Luxe Eyeglass Patented (Ovalex Spring)	*Mountings per doz.*
1-10 12K Gold-filled	$7.50
10K Gold	16.50

Our Response to a Growing Call for Gold-filled Varsity Spectacles

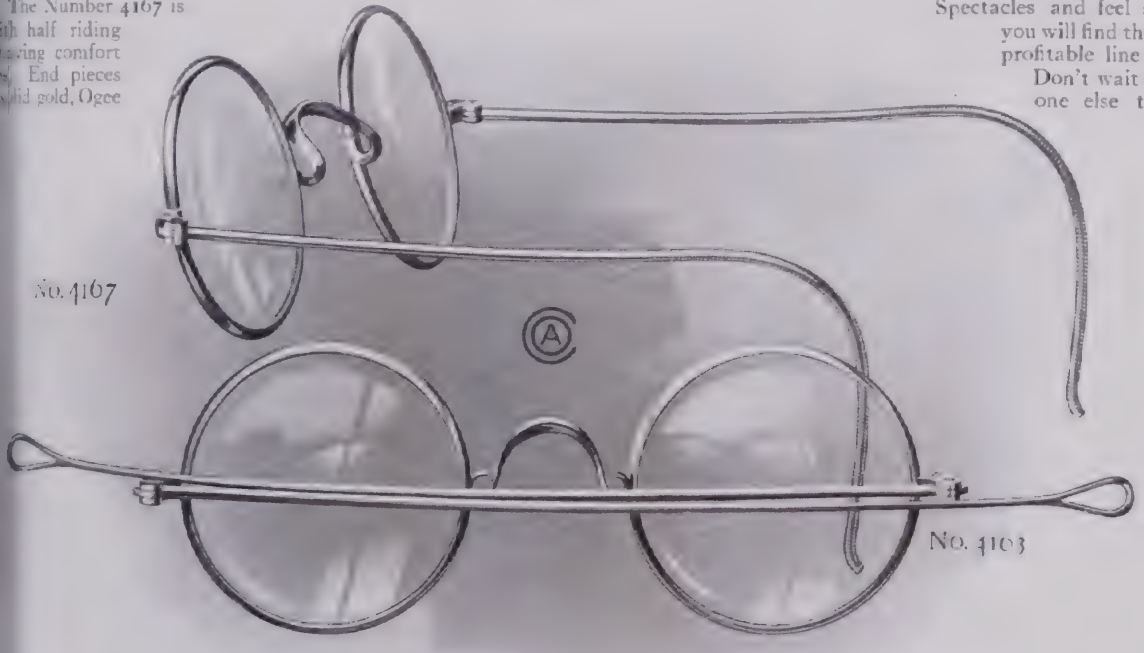
A direct result of forecasting a demand, and the steadily growing call for Gold-filled Varsity Spectacles, we announce the completion of two new models made in 1/10 14 Karat gold with solid gold end pieces.

These new styles retain practically the same rich, solid appearance and in AOCo solid gold Varsities, the finely proportioned bridges, the perfect finish and comfortable bridges and temples. The Number 4167 is made with half riding temples having comfort cable tips. End pieces are 10K solid gold, Ogee angular for reading. The Number 4163 Varsity is made with straight temples and open tips, with the same 10K solid gold Ogee angular end pieces. The temples are especially flexible, due to special AOCo manufacturing processes. Even a superficial comparison of these with others will prove the value of our method.

Bridges on both are either "C" style with curl foot or the new close-fitting band bridge. In ordering, be sure and specify which you wish.

Eyes are 40 mm. and three sizes of P. D.'s are made: small, medium and large. Unless sizes are specified, each dozen is supplied in assorted P. D.'s.

We anticipate a heavy demand for Gold-filled Varsity Spectacles and feel sure that you will find them a very profitable line to carry. Don't wait for someone else to get in ahead of you. Order at once of your jobber at the following prices:



Cat. No.	Description	Trade price per pair
4167	1/10 14K Gold-filled Varsity Spectacles with 10K solid gold angular end pieces. Half riding temples, comfort cable tips,	$7.50
4163	1/10 14K Gold-filled Varsity Spectacles with 10K solid gold angular end pieces. Straight temples, open tips,	6.00



Guarding against Errors at Lensdale

Boards to the left of them—boards to the right of them, boards on all sides of them; and every board holding from one to twelve dozen pairs of lenses. In this case there is no volleying and thundering to be sure, but there certainly would be if one of the boards should by any chance become misplaced! Picture to yourself thousands of dozens of lenses going through our Lensdale plant daily and try to imagine the amount of detail work necessary to see that no slip-ups occur. Divide those thousands of dozens of lenses into all the various types



"Boards" just received via overhead tramway from the grinding plant

which must be made in an enormous plant such as ours is, and you get some idea of the tangle which would ensue if our system of checking had not kept pace with the increase in our manufacturing.

The big re-inforced concrete building we refer to as the "New Lensdale," is devoted entirely to edge grinding, inspecting and finishing. By means of an over-head tramway, running from the Grinding plant, where all the surfacing is completed, the red boards, each with its quota of lenses, are conveyed to New Lensdale, where the finishing is to be done. As the boards come in, all powdered red from the "rouge" used in polishing, they are quickly sorted out into their respective classifications, whether Toric Plano Cylinders, Plano Cylinders, or whatever their form may be. Each board is then given a ticket which follows through with the lenses until they are inspected, and placed in the storeroom.

The work is first given to operators whose duty it is to inspect all lenses for quality, picking out all that may be scratched, chipped, strained or in any way defective, so far as can be determined by a first examination. All that are below standard are immediately picked out, and either sent back to be reground or thrown as worthless. It is astonishing to watch the rapidity and ease with which lenses are handled. after another they are polished, held to the light put through a rigid inspection. Then having placed on boards which by their color determine quality of the lenses, they are sent across the to the "pickers out."

The next step is to mark the axes of spherocylindrical and other similar lenses, and lay them position so that they may be handled at the ing machines with speed and precision. In hands of the "pickers out" they must once again tested, this time to see that they focus correctly of the proper thickness, and are not prismatic. of these tests is a separate process, and failure pass one of them by even the smallest margin enough to cause the lens to be rejected. Different methods are used for making the desired Toric Plano cylinders, compound Torics, cylinders and compounds in flat form are focused by means of the Lens Measure, others are focused by machines. Up to this point all lenses have subject to practically the same treatment. however, a further separation is made, and "interchange" work is sent to the huge room.

During this time a careful record is kept



Preliminary inspection

each board of lenses by the various operators handle it, and as this or that lens is thrown defective, a record to that effect, showing the of its rejection, is entered on the sheet accompanying that special board.

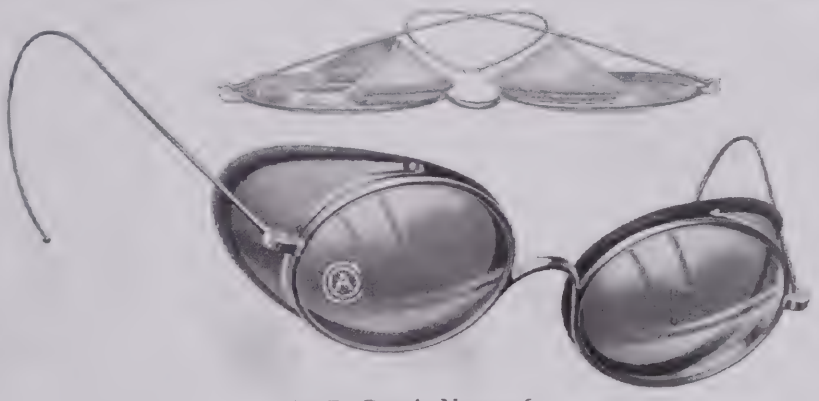
After the lenses have passed through every successfully, they have next to be wrapped placed in the storeroom. But the trouble m

yet be over, for before being allowed to pass, they must submit to a final inspection. From each lot of lenses, all wrapped as they are, four from each



Inspecting Interchange Work

dozen are selected at random and given a final severe test. Usually they measure up to all standards successfully, whereupon all are passed. If, however, any lens does not pass this final inspection, not only that one but *the whole lot from which it was taken* is sent back to the "pickers out" to have the whole process repeated. This applies to edged lenses also, after they come from the edging process.



AOCo Goggle No. 3026

In thus briefly outlining the precautionary measures we take to insure only perfect lenses being sent out under the AOCo trade-mark we have made no attempt to dwell in any detail on the many operations through which each lens passes. We have simply sought to show what pains are taken to insure against all possible errors. But you know, "accidents will happen—etc!" It is our aim to give you the best service and the most reliable goods that can be manufactured. The exceptions may sometimes come up, but they only go to prove the rule that AOCo lenses are the product of a company that appreciates the necessity for accurate work and is fitted to give it.

Specify AOCo lenses on your orders. It will give you the satisfaction of knowing that you are handling the best lenses made.

Busy Times for Goggles Now

"Have you heard about Chug's new car? Understand it is an 'Ump-ump 90' and can take the Matterhorn on the high." Or, "Did you know that Jounchem blew out three tires on his way to his mother-in-law's funeral last week?" That's a fair sample of the spring talk that is filling the air about now—just the audible evidence of the reawakening which takes place in motordom at this time of year. It is for you live ones to take quick advantage of this feeling and turn it to your own profit.

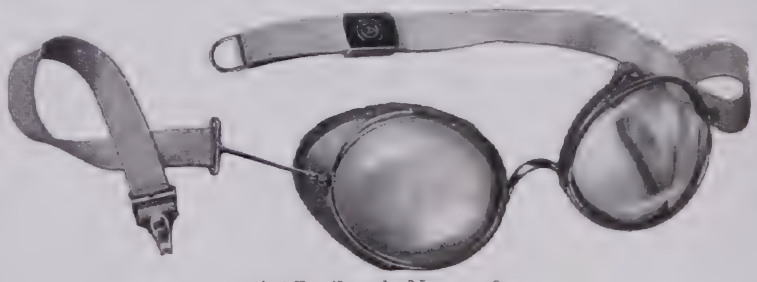
Put your best foot forward and prepare a good assortment of goggles that will pull dollars from the pockets of every autoist that sees them displayed in your store. Here are two excellent models to start with, made in either white metal or gold-filled, as you prefer to order.

Send your orders to your jobber. You will find that these models will please *more* autoists than any other styles made.

No. 3026 White Metal with Coquille or Curved White or Smoke Lenses. Price, per dozen, $7.00.

Gold-filled, with Curved Amber Lenses, per dozen, $12.00; with Fieuzal lenses, per dozen, $13.00.

No. 3028 White Metal with Coquille or Curved White or Smoke lenses. Price, per dozen, $7.00.



AOCo Goggle No. 3028

Gold-filled, with Curved Amber Lenses, per dozen, $12.00.

Fieuzal lenses, $13.00.

I've fooled around all day, and yesterday, too, and the day before, but things are going to hump—to-morrow.

I've had an idea for some time that this or that would be a cracking good scheme, and I'm going to try it out—to-morrow.

I need a better and more attractive display for the goods in my store—and I'm going to take that question up in earnest—to-morrow.

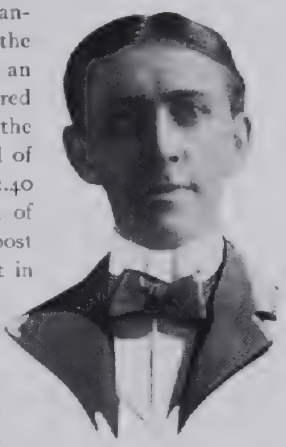
I've felt for a long time that this store needed brightening up—needed gingering—and I'm goin' at it for all it's worth—to-morrow.

But Not To-day!
Lord No! not TO-DAY!

From THE GUINEA PIG.

Have You Met "Pitt"?

Here is a picture of "Pitt Herbert," the man who sits behind a glass topped desk and gives expert advice on "How, when and where to order glasses." He's some expert, too. In fact he always has been an expert at one thing or another. Before he had attained to the dignity of long trousers he was such an expert at sweeping offices he dickered for and secured a "position" with the AOCo to perform that most essential of duties at the munificent salary of $2.40 per. Along with this job went that of errand boy, another most essential post of endeavor. He was such an expert in the fulfillment of these labors that he swept himself right into the shipping and inspecting room which in those days, twenty-seven years ago, were in one department. It took him three years this time, but again he became so expert that he shipped himself into the gold department where he was soon giving the other men pointers on "methods, their use and abuse." In his spare moments (though he would doubtless say he never knew what such things were) he did a bit of exploration into other departments, after which he again headed for office work, this time to take his seat at one of the desks under which he had been sweeping a few years before.



In 1910 Pitt took a trip abroad, making a quick tour of England and France with Mr. Petherick, the head of our London office, Herbert for the first time meeting many European friends of the AOCo who had known him so long by letter.

Mr. Herbert is now division superintendent of several important manufacturing departments. Probably you who have been our guests in Southbridge know him personally, for he sits in the main office and keeps his eyes open, looking for a chance to meet anyone who can talk specs and eyeglasses with him. If you haven't met him, we hope you'll come to Southbridge and do it. That is an invitation to you and a wish for ourselves, as we know that when he's talked with you, you'll be so enthusiastic about AOCo goods that you'll never sell any other kind.

"I wish to thank you for the beautiful catalogue you sent to me a short time ago. This is the finest I have seen. Also for your monthly AMOPTICO. This is very instructive as it keeps me posted on all the new mountings, etc. I have used the Fits-U mounting for some time and it has proved very good. The new one with the Ovalex springs is a winner."
C. D. BOYLE, Optometrist, Moline, Ill.

Perhaps It Would At That!

Here is a sentence we recently discovered in a news advertisement published by an optical dealer in the South. T is nothing like frankness in these little matters:

"If you suspect that your eyes are not right, our examin will prove it without a doubt."

Our guess would be that there was not much chance of prospective customer leaving that dealer's store without a of glasses.

Here's One Live Firm in Georgi

The A. K. Hawkes Co. recently sent us a photograph of show window all "dolled up" with a display of Fits-U Eyegla We are willing to bet a Carnegie library to a second-hand that no one will pass this store without knowing that the A. K. Hawkes Co. is in the optical business, and what's more, that they sell Fits-U Eyeglasses Do you notice the large model of a Fits-U just above the card reading "New Style Fits-U's"? That is one of the large models we keep in stock and sell through jobbers for $7.50 to those who have convenient window space to use them.



And, by the way, don't forget that we have a dandy toric window display showing twelve stages in the manufacture of a toric lens, which we'll send for $1.00. We have sol large number of them and everywhere they have made a hit. Send for the little circular which describes it. 'Twill well worth your time and a postage stamp.

Those Black-Rimmed Glasses

By Anthony Euwer

NOW I've been tryin' to get wise
How these new rims assist the eyes
And find what's in these big black rings
That makes folks wear such awful things.
Since tryin' them I'm wise, all right,
They really do assist the sight
And help you see how fashion ken
Make Billy Goats of Cats and Men.

Yet, when I pause, we women folks
Had best go slow on pokin' jokes
About these rims, not try to find
Too many faults with poor mankind.
For, on the level, from yer heart,
He hasn't got the hundredth part
The opportunity to go
The limit in this fashion show—
With just his hat and coat and pants?
It don't begin to touch our chance.
'Sblood! When I see the million ways
A woman takes to rouse amaze—
The eighty billion bran' new jiggers
They stick each week upon their figgers,
Man's not so worse with all his flaws,
And I'm a woman to the claws!



By permission of the International News Serv

Amoptico

Vol. III May, 1914 No. 2

Published Periodically by

American Optical Company

1833-1914

Channing M. Wells, President — Albert B. Wells, Treasurer

J. Cheney Wells, Vice-President and Secretary

General Offices and Works
Southbridge, Massachusetts, U. S. A.

New York . . . 15 Maiden Lane
Chicago . 122 S. Michigan Boulevard
San Francisco . . 140 Geary Street
London . 39, Hatton Garden, E. C.

Cable Address: AMOPTICO, Boston
Western Union Code used

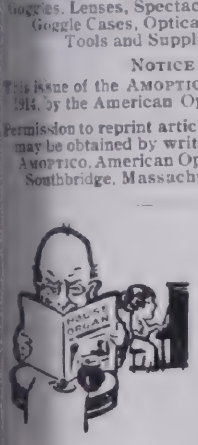
Manufacturers

Spectacle and Eyeglass Frames, Mountings and Material, Eyeglass Chains, Automatic Eyeglass Holders, Trial Sets, Trial Frames and Accessories, Automobile Goggles, Lenses, Spectacle, Eyeglass and Goggle Cases, Optical Machinery, Tools and Supplies, Etc.

NOTICE

This issue of the AMOPTICO is copyrighted, 1914, by the American Optical Company

Permission to reprint articles or illustrations may be obtained by writing to Editor of AMOPTICO, American Optical Company, Southbridge, Massachusetts, U. S. A.



EIGHTY years' experience—eighty years' experience. Yes, we admit, it is a phrase we repeat continually and you may be "sick of it." "Why", says someone, "of course a long experience is a good thing, but when the time comes that the originators of a business are supplanted by younger men, say in thirty years, that firm has about as long an experience as one can really call a special advantage. After that length of time, added years mean little. The old men are gone, taking with them much of the knowledge that built the business, and where is all your 'experience' then?"

If by that word experience was meant simply the amount of accumulated facts crammed into the heads of those who originated the business then, we admit, thirty years' experience would be as useful as three hundred. But to a Company that word has other meanings. It stands, for example, for a long list of patents, only usable by that single Company. It stands for well guarded manufacturing secrets (a thing almost every concern has in these days of strenuous competition) for steadily advancing research work, each successive operation taking as its starting point the most advanced results of the previous experiments, and most of all for a spirit—an "esprit de corps"—with its roots bedded deep in the honored traditions of the business. Such a period of successful business advances brings with it certain marked-out policies which must be followed. A certain quality of goods is necessary to maintain the "standard"—that intangible but nevertheless positive ideal to which all goods must measure up.

As year succeeds year, this steadily gathering experience makes itself felt in the efficiency with which the firm carries on its business of manufacturing and selling. "Line upon line, precept upon precept, here a little, there a little," the organization adds to itself and grows. Old or inefficient methods are cut off. New and progressive ones are substituted.

American Optical Company has gone through—is to-day going through—such a gradual evolution. Our eighty years of experience have laid down certain indelible rules relating to quality of goods and conduct of business which we do not lightly break.

We have found that the policy that pays is the one that satisfies. And we place on the market only those goods that meet the requirements which have resulted from our long experience.

And that is why we feature the fact that we have had eighty years of experience. It means safety to you when you buy our goods, and the surety that you will find those goods satisfactory from every standpoint. Specify AOCo products in ordering from your jobber, and be sure that you get them.



YES, we're all after the dollars; we admit it freely—in fact quite cheerfully. Some of us chase them one way, some another; some wear a dark frown, others chase by with a smile. A few manage to catch them; most of us do not—which of course accounts for the worried expression. We wish more folks in the optical business were able to pursue the chase ensconced in leather cushioned seats with big pneumatics whirling around underneath, so we are going to give you a little tip: the man who is most likely to win the race and "collar the dollar" is he who sells what the public wants. Millions of people are being reminded monthly of the fact that Fits-U Eyeglasses are the best on the market. And the result? Well, sell Fits-U's and see. Before you know it the elusive gold eagles will be resting in the place where you keep your bank account, and the "worried look" will be left for the other fellow.

Will You Do This For Us, and Yourself Too?

Every day we receive scores of requests from dealers all over the country for AOCo advertising material, which must be imprinted with their name and address before being sent out. It would very materially simplify our work and also insure a more satisfactory result to you if you would be sure to tell us each time exactly what you wish printed. Write your name and address legibly (this is not as easy as it sounds) or print it if you can, just as you wish it to appear on the advertising material. And remember that sometimes "words is long and space is fleeting," so make your imprint as short as possible.

Our printing department informs us that they're as busy as a one-armed paper hanger with the brown-tail itch. But we don't care. Send your requests in just the same.



SELLING *the* GOODS



Window Sign Describing Fits-U Bearing Pads

It's been a long time coming, but it's here at last—a two-color window sign to call your customers' attention to the fact that sore noses and spectacles do not necessarily go together. Two-thirds of the battle of selling such little conveniences as these Fits-U Bearing Pads is in the way in which you are able to call attention to them. So you'll be glad to learn that with each package of Bearing Pads you buy there is a little coupon enclosed, which, when returned to us, entitles you to one of these signs.



AOCo Window Sign No. 5W17

The sign isn't all, though. We also have a very carefully worded form letter designed to arouse interest on the part of your customers who do not frequently visit your store, and we will send a copy of this letter together with the window sign.

There is a chance for a neat little profit on each pair of Fits-U Bearing Pads you sell and, as there is no work connected with carrying them, and such a small amount of money invested in them at most, they make a very attractive proposition. Everyone who wears spectacles is a potential purchaser of these comfort-giving pads.

Description	*No. 3614*	*Per dozen*
1-10 12K	Gold-filled arms and pads, Complete,	$5.00
1-10 12K	Gold-filled arms with 10K Gold pads, Complete,	7.50
10K	Gold arms and pads, Complete,	10.00

What Are Kryptoks, Anyway?

Ever have that question fired at you? The chances are you've answered it and its variations so many times lately that you're beginning to be surprised at the ignorance of the public in general. Our new Kryptok leaflet just issued is designed to answer just that question, and several others besides. It is arranged in an unusual way, taking the form of a "catechism," as we've called it, for it first asks the most vital questions about Kryptoks and t answers them clearly and concisely. Also, whic very important, it says that you are the dealer *sells* Kryptoks. It's the kind of circular that start people coming to you—and you won't need help when that begins.

We will send a reasonable supply of these leaf to you free, if you wish, with your name and add all imprinted on them. You will find this is livest circular of its kind yet issued. Just sen your requests, and specify AOCo Kryptoks of y jobber.

How Do You Like This One?



AOCo Electro No. A25

Did you e notice that words "Adv tise" and " versity" v only by o single lett There's food thought the We've had opportunity notice the dif ence, not beca we've looked up in Webst Unabridged, because we're touch with th sands of opt etrists and o cians all over the county. For the live wire wh avoiding adversity by advertising in his local ne paper, we've got a new electrotype waiting. a good one. We admit it, blushingly, of course, nevertheless quite firmly, and with plenty of "S froid" (whatever that may be). In fact if it wa a good one, you wouldn't find any AOCo trade-n on it.

If you want it badly enough to write for it shall be glad to sent it to you free, but our wir thoughtwave station is out of commission just and we can't hear you when you only *wish* you it. A sheet containing six changes of "copy" is with it, which will enable you to use the elec number of times, and provide each advertise with plenty of variety and snap. It is the fir have issued designed to advertise Zyloware s and it should prove a good "business-getter" fo

Branch of the American Optical Company at Chicago

Here are three views of our Chicago branch where the American Optical Company keeps open house. Our first offices in the city were opened about August 1st, 1909, in the Chicago Savings Bank Building, corner of State and Madison Avenue. In the spring of 1911 this office had become so popular with our customers that it was necessary for us to move to the People's Gas Building at 122 South Michigan Boulevard where we were able to obtain larger quarters and at the same time place in our office a stock of the more staple lines for which there was a tremendous and ever increasing demand in this territory. Originally the offices occupied two rooms, but in 1912 it was found necessary to remove the dividing walls, making one large room, in order to give us even the small amount of additional space which could be thus secured.



Part of Stock Department



A beautiful view of Lake Michigan is obtained from these windows



Goods of all descriptions are on display

Mr. F. N. Kreissl, who has for many years been associated with the optical and jewelry trade in Chicago, is manager in charge, and with him are Mr. A. C. Witt, and Mr. C. A. Partenheimer, all of whom are very well known to the trade in Chicago and surrounding territory. Mr. R. S. Turner is the principal road representative from this branch.

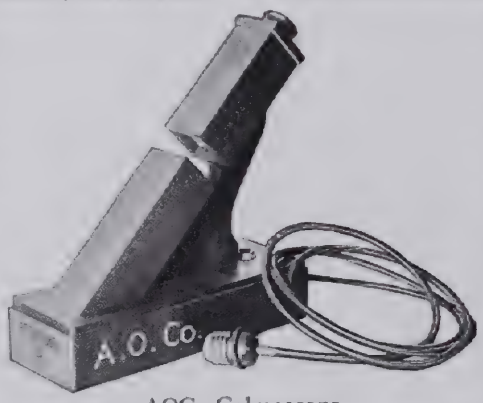
The offices are beautifully located on the twelfth floor of the People's Gas Building, directly overlooking Lake Michigan, and presenting a view which is greatly admired by the many visitors.

We extend a cordial invitation to all oculists, optometrists and opticians to visit our offices whenever in Chicago, where a full line of our samples may be seen and demonstrated. A closer touch may thus be secured with our goods, which will enable you to order with better understanding from your jobber.

An AOCo Colmascope Will Save You Many Broken Lenses

As every Optician knows there are two kinds of strain which may develop in a lens: physical and mechanical. The fact that it is impossible to detect either of these kinds of stresses by the eye alone is responsible for a very large per cent. of the breakages in lenses which so often seem to occur without rhyme or reason.

A physical strain, which is really a molecular stress, is created during the manufacture of the lens itself, either by insufficient annealing, improper cooling during the process of moulding, by bending, or fusing. The tendency of a lens to break varies directly with the degree of strain. In extreme cases, even a sudden change of weather may be sufficient to cause a break. A mechanical strain is one which has been set up after the lens is finished, and is usually due to improper setting in the strap in case of rimless work or to an overtight eyewire in rimmed work.



AOCo Colmascope

One of these two kinds of strains, physical or mechanical, is only too often present, and it is then obviously to the advantage of the optician or optometrist to be able to find it at once. This is especially true in the case of fused bifocals, which, because of the processes through which they have gone, are if anything more subject to strains of a physical nature than the ordinary lens.

When a lens is to be tested it is placed in the aperture of the instrument, and an electric light throws a strong illumination upward through it. The eye is applied to the top of the i ment. Any strain in the lens then becomes immediately in the form of well marked and defined shadows, becoming or less visible according to the amo the strain.

In a theoretically perfect instr no light would come through exc spots where the lens was strained. efficiency of the instrument therefo comes greater as the amount of ligh through the eyepiece diminishes. Bu fection is not necessary for all pr purposes of examination and the C scope while not entirely eliminating makes strains easily visible. The st portions of the lens allow the light through the instrument. Therefo greater the strain, the greater the a of contrast between the strained and normal areas of th the strained portions appearing light on a darker backg

Fig. No. 1 below shows the appearance of a lens which has physical strains. The advantages of being able to detect condition are obvious. Think of the amount of wasted wo could be saved if you were always sure that each lens you was without physical strains and could be relied upon not t on some slight provocation.

Fig. No. 2 shows the appearance of a lens which is subj


Figure No. 1

mechanical strain due to an improper adjustment of the strap. It is a comparatively simple matter to eliminate this strain by a slight adjustment of the screw or by remounting or refitting.

The use of the Colmascope will save a great amount of time, money and exasperation. It will insure a knowledge of each lens you grind and the way in which it is fitted to the frame. It means more perfect work and more satisfied customers.

Each instrument is beautifully finished in mahogany. Arranged for a 110 Volt circuit the price is $18 of your jobber; for a 220 volt circuit, $19.50. You need only talk with the man who uses one to be convinced of your need for it.


Figure No. 2

We take pleasure in announcing the completion of a new Trial Set Catalogue containing a full description and prices of various styles manufactured by the American Optical Company. Our foreign friends will be glad to know that it printed in a British and Spanish edition as well, which will be ready shortly.

Those of you who are contemplating the purchase of a trial set, whether office or traveling style, will find this book a v terial aid to the proper selection of the style which best suits your needs. We will send one copy free to optometrists, ocu opticians who wish one. Requests should be written on your business stationery or sent with your business card enclosed.

AOCo Lens Drilling, Past and Present



A smell of drilling fluid, (melange) greets us strongly as we open the door into the AOCo lens drilling department, and a low, steady hum of machinery. All around us are "boards," as they are called, filled with the lenses that have been ground, polished and edged and are now ready for the drilling. On each board as they come into the department are twelve dozen lenses. They take up so little space that we hardly realize how many there are in the room as we glance around, but as we watch the speed and precision of the work we begin to gain some idea of the huge quantity of lenses that are being handled, and we are tempted to ask, "Where can they all go?"

When the boards come to this department, each containing twelve dozen lenses, they are stacked at one side and the contents shifted to boards which never leave the room, containing eight dozen. It would be impossible to handle the lenses on the original boards, for the drilling is carried on under a steady stream of melange, and the boards soon become saturated with it. If they were then sent through other departments, it would be impossible to keep anything dry and clean.

The operators sit with a board of the undrilled lenses at their right hand, and the lenses are placed under the drill with an accuracy and speed bespeaking long practice. A stream of melange from a large tank attached to the wall above our heads flows on the lenses during the drilling. The flow never ceases. As this lubricant runs into pans beneath the machines, it is collected and returned again to the tank by a force pump, thus forming a complete circuit carried on without waste.

Separate operatives carry on the broaching, and as one broacher can broach as many lenses as two or three operators can drill, a comparatively small number are sufficient for the work.

It would be perhaps not impossible, but exceedingly difficult, to duplicate the AOCo drilling department, for it is so perfectly equipped and so efficiently carried on. It has required a long growth to arrive at the present result, and the experience thus gained shows in the way the work is handled. Many of the old-timers still working in "Lensdale" recall clearly the time twenty years ago when the drilling was a one-man affair, and the one man who did the drilling had two "strikers"—young boys—to help him. What would seem peculiar to us now is the fact that these strikers were paid from the driller's own pocket.

A driller twenty years ago was a privileged character who worked more or less according to his own inclination—which usually led him to work less rather than more. The work was never started till half past eight or nine o'clock, when the driller strolled in as quite a man of leisure. Once in, he worked under a rule that was recognized by all men in that work, which forbade any driller to work more than seven or eight hours at a stretch. It was thought at this time that the fluid used during the drilling was liable to affect the operator and shorten his life, hence the rule. In spite of this, however, a driller could easily make more than is possible now, which in those days, when Mr. High-Cost-of-Living had not cut his first teeth, was a good salary for a working man. His pay was based on a rate of so much for every hole drilled, and a good driller was capable of drilling about 1700 holes a day.

As though such restrictions were not sufficient, it was definitely understood that if a driller did not feel like coming to work for a day, or two days, or a week, as the case might be, no one else would touch the work during his absence. The result was that important orders were often at a standstill while awaiting the return of the leisurely inclined operator. Diamond drills were still unheard of, all work being done with steel tools which were sharpened by the one who used them. Naturally it was impossible to keep them sharp for any length of time, and it was necessary to stop drilling about every half hour, take the drills to a revolving lead wheel and there

resharpen them. A small oil cup was placed over each drilling machine, and as the lubricant flowed off the lens being drilled, it was collected in a pan underneath the machine and returned to the cup.

The machines themselves were comparatively crude. It was necessary to use two, one to drill the first half of a hole, the other to finish the hole from the other side. And while the lens was held between movable jaws quite similar to those used to-day, there was no support for its centre, so the pressure necessary for drilling very frequently cracked the lenses. As many as six dozen lenses were sometimes broken in the course of one day's work.

Every workman did his own broaching and washing. The drilling work ceased around four o'clock to enable him to finish all the lenses drilled during the day.

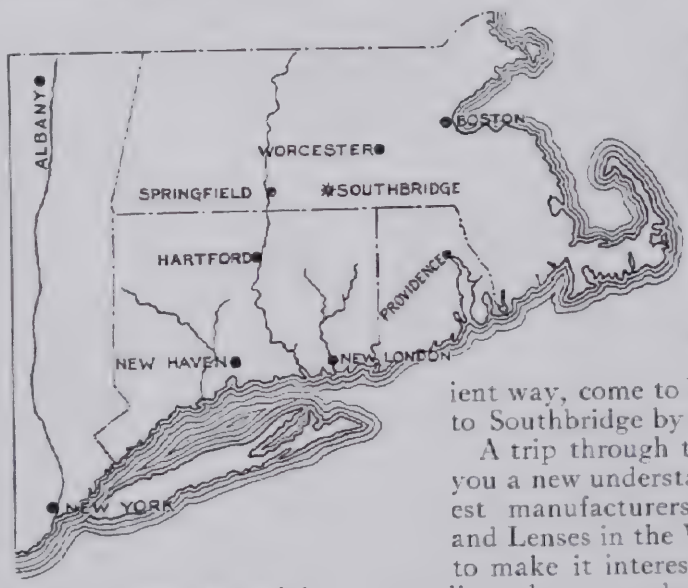
With the advent of diamond drills and more modern factory processes, a radical change t place. The gentlemanly drillers were replaced woman operators who were thoroughly compe to do the light work, and who did not find it ne sary to take "holidays" on special occasions. machine was made to do the work formerly by two, and the result of the many improveme was a great increase in the speed with which le could be drilled.

The AOCo uses in its own work practically same drilling and broaching machines which it o for sale to you. Our wealth of experience enabled us to correct and strengthen weak po and even improve the stronger ones until our chines have become the best for the work of ev optometrist and optician. It will be worth y while to investigate these machines thoroughly.



Our Latch-string Is Always Out—Come and See Us

Do you know, it almost hurts our pride when we have to print a special map to show where Southbridge is. But we realize that there may still be a few of our very good friends in California or Texas or Oregon who, although they have seen "Southbridge, Mass.," upon our advertisements, for a good many years, are still a little bit uncertain as to our exact location, so we feel compelled to do it. At any rate, here we are, waiting to receive callers with our best "bib and tucker" on. We are always "at home"—except on the Fourth of July or Christmas or some equally special occasion.



If you come by auto will have no difficulty i cating us, twenty miles f Worcester or fifty miles f Springfield, over exce roads. If your auto is sti phantom merely, a bran the N. Y., N. H. & H. R (now guaranteed to s without hitching) reache

From Boston, you either come direct by or, usually a more con ient way, come to Worcester by train and to Southbridge by trolley.

A trip through the AOCo factories will you a new understanding of the phrase "I est manufacturers of Spectacles, Eyegl and Lenses in the World." We shall ende to make it interesting for you. So just us a line when you plan to come and we'll be to receive you.

Reduction in Price of Ovalex Fits-U Eyeglass Mountings

We are glad to announce a reduction in the price of Ovalex Fits-U Eyeglass Mountings. Price are now the same for both Ovalex and Coil Spring Fits-U's given below, and your jobbers will fill your orders at these new prices

OVALEX FITS-U EYEGLASS MOUNTINGS

No. 03112 with patented Short P. D. Bridge and Rocking Upper Pad Guard

1/10 12K Gold-filled	Per Dozen $7.(
10K Gold	Per Dozen 16..
1/10 12K Gold-filled Fitting Sets of one dozen each	7.

Push the Ovalex as your leader. It means more profit.

What the "Other Man" Says About Us

It is pleasant sometimes to stop in our mad career and hear what the "other fellow" has to say on topics about which we have our own opinion. At least we find it so, and that feeling always gives an added interest as we read the letters that are sent to us by users of our goods. Coming as they do, bearing the postage stamps of practically every nation in the world we are able to get a breadth and variety of opinions that is quite beyond the possibilities of any concern with a comparatively local distribution. Here is Mr. A. Proctor's opinion of us as expressed in a recent letter:



Some time ago I requested one of your late Catalogues, and in due time I received the same. I have since taken pleasure in looking over its contents from time to time, and showing it to my friends and customers. I have at times received many different kinds of catalogues, etc., but I have NEVER seen any firm or company put out such HIGH GRADE illustrations; not only in this, your late Catalogue, but in anything that you people attempt to show, it has to me always been a work of Art. Naturally I concluded that you could make better goods than the other fellow and I commenced handling your goods, and I am only pleased to say that I have only PRAISE and COMMENDABLE words for anything that bears the Mark AOCo of the American Optical Company.—A. Proctor, Lincoln, Nebr.

We sent a general catalogue recently to Mr. Will Pfaff, McKeesport, Pa., and this is the letter he wrote us about it.

Your catalogue recently received and it certainly fills a long felt want. The illustrations and descriptions are very good indeed. Much of your product I carry continually in stock and prefer it to all other makes. I am sure this catalogue will be a great help to me in ordering stock and sincerely hope you will be in part at least repaid for the enormous expense to which you have been placed in putting out such a fine book. Wishing you continued success which you surely deserve, I am sincerely yours—Will Pfaff.

From Boston comes this letter. It speaks for itself:

We acknowledge with thanks the receipt of your catalogue. Please allow us to commend you on the completeness with which you have placed your goods before the optician. As we are a new firm, we consider this available reference to us in making our selection of material, and we shall use AOCo goods on every possible occasion.—W. F. Upham & Co.

The bouquets we receive relative to our "Dealer Help" advertising arrive in almost every mail, but numerous as they are each is appreciated fully. Our records show that a steadily increasing number of optometrists and opticians are making use of this advertising service.

Some time ago we received a quantity of blotters and also cards for street car advertising. These cards certainly seem to be business getters. We have displayed them in our windows and they do get attention; will put them in the cars the 1st of January.—Meyer Opt. Co., Stockton, Cal.

The slide number 9 which Mr. Eames of Gardner, Mass., refers to below is the lantern slide advertised in our December Amoptico. This is what he says of our service:

Your slide No. 9, also blotters, received recently, are proving more than satisfactory as the increased demand for Fits-U mtgs. has obliged me to increase my orders for the same very much. Furthermore, the comfort and ease of adjustment continue the advertisement.

But what do the "Others" say of our goods themselves? Read.

I am handling Fits-U's exclusively and find that they give better satisfaction than any others I have ever handled.—Prof. W. Clay Davis, Peotone, Ill.

I have been prescribing Fits-U eyeglasses for nearly four years and I find them superior to any other in elegance and fit and in staying qualities. I stand behind the Fits-U and I know the American Optical Company will stand behind us both.—W. D. Strahl, Camas, Wash.

Have bought of the same jobbing house, — — —, since 1890, and give preference to the AOCo because am not looking for "bargains," but thoroughly reliable goods; all my Rx specify "The best make only." Under no consideration will I handle inferior goods, in the optical line especially.—W. A. Graber, Sharpsville, Pa.

Things are surely moving these days in Mexico, but not so seriously as to entirely stop all optical work. Here is an excerpt from a letter of recent date from a large jobber located in that country.

As I expressed myself in one of my former letters to this company, my great success during my first year of being established was principally due to the unexcelled products of your company and the most courteous manner and promptness with which my orders have always been attended.

These letters are picked at random from the many we are constantly receiving. They reflect the "Other Fellow's" point of view. It may be that a thorough acquaintance with our goods will give you that point of view, too.

Captain Wollaston's Patent

Did you know that the idea of Meniscus Lenses is over 100 years old?

It is well for us who think we are so wise in our own day and generation to turn back to history occasionally. There is nothing like it to make us realize what a small part in the drama of the world we are playing, and how little we are adding to its store of knowledge. Did you know that in 1804 a Mr. William H. Wollaston patented the idea of *Meniscus Lenses?* Read this:

British patent No. 2752, A. D. 1804. Granted to William H. Wollaston. The object of my invention is to remedy the following defect which has been observed in *spectacles* heretofore in use, viz. that no objects appear distinct through them but such as are seen through the centers of the glasses, or nearly so, but are indistinct in proportion to the distance of the part of the glass through which they are seen from the center, whether sideways or upwards or downwards, that is to say the indistinctness is greater in proportion as the rays of light passing from an object to the eye pass more obliquely through the glass, as is represented by the lines E, O, in Figs. 1 and 2 in which E is the place of the eye and AO in each is a section of a spectacle glass of the common defective construction. I have found that the defect above mentioned may be remedied by means unnoticed by the best practical opticians and contrary to the opinions of the most celebrated writers on optical subjects. Having observed that the portion of glass employed in any one position of the eye is small, I perceived that by making the substance of a glass curved in the manner of a hollow globe each portion of it might be situated nearly at right angles to the direction of the sight and would thereby render lateral objects distinct without impairing the distinctness at the center."

Then follows a description of the present meniscus form of lens on which a patent was allowed.

FIG. 1

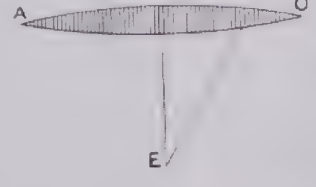
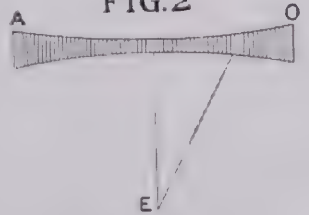


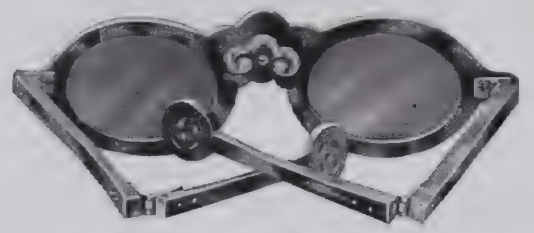
FIG. 2



The only trouble was that Mr. Wollaston was about 100 years ahead of his time. It remained for this generation to carry into actual execution the ideas conceived so long ago.

Which Are You Selling?

This picture is of a pair of Chinese spectacles now lying in our exhibition room. They were made many, many years ago. The lower picture shows a pair of Gold Fits-U Eyeglasses taken from AOCo stock.



Between the two examples of the art of their respective times lies a long, long history of development and change—of progress. The Chinese spectacle probably stands for perfection in the optical art of its period; the Fits-U eyeglass, too, stands as the highest attainment in the optical construction of to-day.

To compare the two would be ridiculous. They represent different ideals. Yet in spite of the fact that the older one is the product of totally different aims and purposes, there are still many optometrists and opticians who are buying, and selling to their customers, John Chinaman's spectacles.

No, of course we do not mean that *literally;* but there are many men who have allowed themselves to drift so far behind the manufacturing improvements of to-day that they are not selling the eyeglass and spectacle goods they should.

Gold Fits-U Eyeglasses are the highest attainment in modern fingerpiece eyeglass construction, made to meet the demands of twentieth century purchasers. They are the kind you should sell. It is impossible in the limited space at our disposal to illustrate all the various styles we make; but your jobber can give you full particulars. Here are the catalogue numbers of the styles in which they are made, and the prices at which they are sold to you:



FITS-U MOUNTINGS AND FRAMES (Patented)

Nos. 3101, 3103, 3111, 3113, 3123, 3151, 3161, 3171, 3181, 3112.

		Trade Price Per Doz.
Mountings	10K Gold, Rigid or Rocking Guards	$16.50
	14K Gold, " " " "	24.50
Frames	10K Gold, Rigid or Rocking Guards	30.00
	14K Gold, " " " "	42.00

Patented short bridge construction supplied if desired. To specify, place an o before catalogue numbers given above, as o3101, o3103, etc.

The man who invented bifocals

did not lap one surface over another. He actually produced a more perfect ophthalmic result than is obtained to-day by cementing. The old perfection bifocal was a mighty good lens.

Not long after Franklin

experiments were begun on the production of a one-piece lens—two perfect spherical curves on a single surface. All attempts failed. Meantime other forms of bifocals made by combining two pieces of glass by cementing or otherwise were successfully marketed as being more mechanically perfect.

The Uni-Bifo Luxe Lens*

was finally made a success. Two curves are now ground by such ingenious methods and such precise machinery that no line of aberration is apparent between the two. The perfect bifocal of a single piece of glass is a fact.

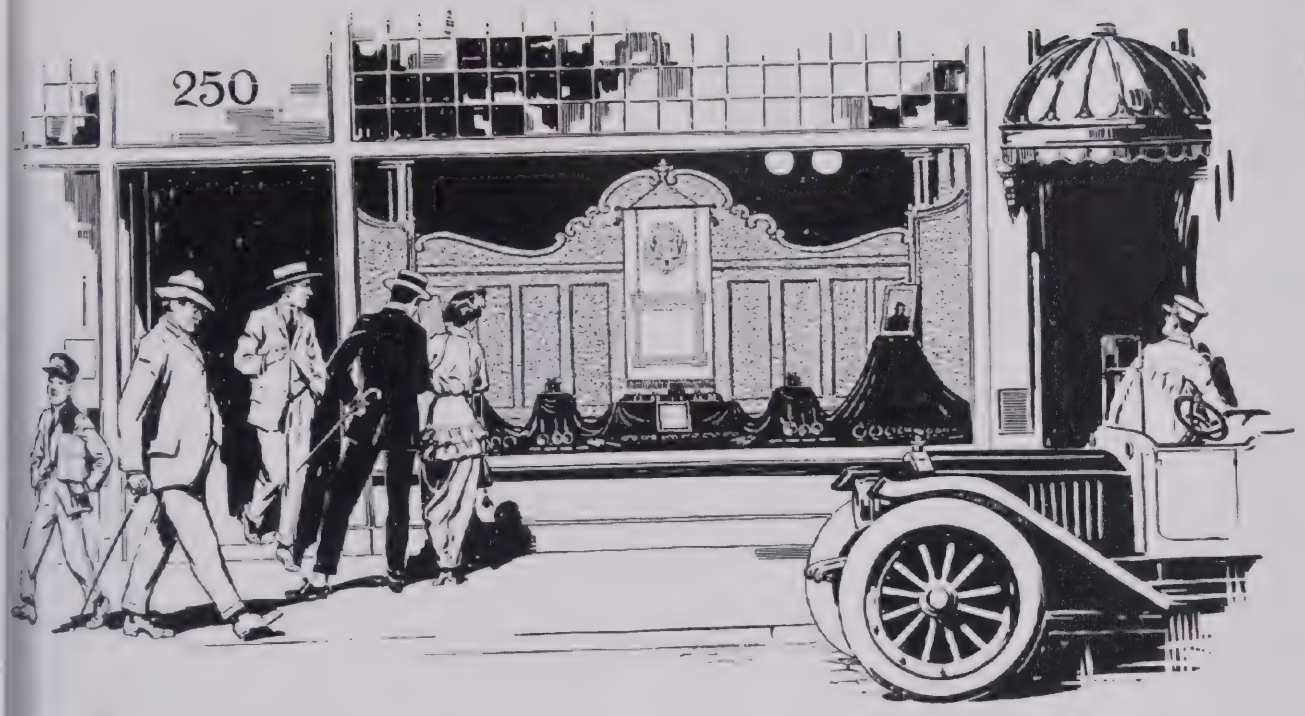
The Uni-Bifo Luxe Lens

represents a most wonderful achievement in ophthalmic lens grinding. It is theoretically and practically the perfect bifocal lens. It absolutely eliminates many of the objections to the ordinary forms. There is a total absence of colors.

The Uni-Bifo Luxe Lens

is now being supplied by the American Optical Company through licensed jobbers. You can order this lens on prescription with either of two sizes of reading portion, 19mm. round or 30 x 15 mm. made in toric form only.

*Reg. in U. S. Pat. Off.



Plan to Enter These Leaders of the World Contests

In this issue of Amoptico we are able to furnish our readers with more concrete details of the big Window Display and Idea Letter Contests of the Rice Leaders of the World Association, in which the American Optical Company holds the representation of the Optical Goods manufacturing industry.

These prize contests as a merchandizing factor will have the greatest possible interest for every Optical Dealer in the country, and all should take this excellent opportunity to gather further prestige and increased trade.

The Association banner bearing the insignia in colors, together with list of members, must form part of every window display to be eligible for the contest. The banner will be mailed free to intending contestants, upon application to the "Window Display Department," Rice Leaders of the World Association, 358 Fifth Avenue, New York City, when the contest opens.

Consider the magnitude of this opportunity. Nearly five hundred cash prizes, ranging from $2,000.00 down, to be awarded to dealers making window displays of any of the products of members of the Association.

The contest remains open for twelve months, commencing May 15, 1914, and ending May 15, 1915. Each display to be eligible must be exhibited for at least one week.

Photographs of the display—mailed flat—bearing on the back the name of the store in which the display was made, address and date of display, photographer's name and contestant's name, to be mailed to the "Window Display Department," Rice Leaders of the World Association, 358 Fifth Avenue, New York City, on or before May 15, 1915. It is desirable that the photographs be 8 x 8, or as near that size as possible, but this is not an indispensable condition.

Here are a few pointers in regard to effective window displays:

A crowded window is seldom a good window.

As a general rule simplicity means effectiveness, and effectiveness in this case means "SALES."

Arrange goods in groups. Leave open spaces.

Goods should be displayed with natural surroundings.

The background of a window should be contrasting, but not dominating.

A jarring note in the color scheme, or any part of a window display, kills sales.

A window display should show the advantage of the goods rather than the cleverness of the trimmer.

A window display should be arranged to attract the attention of the passer-by *before* he arrives immediately in front of the store.

When he arrives in front of the store the window display should hold attention.

Motion in a window is a powerful means of attracting attention.

Human interest, when rightly used in a window display, adds much to its drawing power.

Do not detract from goods by placing glaring lights in the window.

When possible, have lights hidden so they bring out display rather than fixtures.

Originality and good taste are the keys to effective window displays.

A display which is seasonable, taking advantage of important events or local happenings, will create more interest than one not having that special appeal.

While the Window Display Contest is open, the Rice Leaders of the World Association will also run another contest for the public. Cash prizes amounting to $10,000.00 will be given for Idea Letters upon the superior merits or any new uses of any member's products, or suggestions for new business ideas pertaining to production or sales.

There will be 3,500 prizes, ranging from $1,000.00 down.

As mentioned in the last issue of Amoptico, the people will enter your store to inquire details of the AOCo's products. The public announcements of the Association directly invite the public to do this.

People generally are now becoming familiar with the emblem of the Association; they recognize it to be the token by which members of the Association and their products may be identified.

They know that the privilege of using this emblem has been bestowed upon certain manufacturers whose record of achievement has won for them such distinction.

They know as a logical sequence that the products of members of the Association must be desirable.

It is earnestly hoped that all dealers in AOCo's products will seize this opportunity to further their prestige and the confidence of their customers, with obvious advantages to all concerned.



AOCo Benches Equipped with M21 Surface Grinding Machines

This photograph shows a surface grinding bench recently built for a customer in St. Louis. It represents the last word in surface grinding equipment where economy of space is an important requisite. It greatly increased the surface grinding capacity of a shop that was formerly badly crowded, and now allows the men plenty of room.

We have developed these M21 surface grinding machines to meet the demand for a simple, inexpensive outfit, which can be easily and cheaply repaired, and which requires little power. They can be furnished singly or in batteries of any required number. For convenience in shipping, benches are constructed in sections not over seven feet long, and may be bolted together to make up the required length. Spindles are regularly placed 30 inches apart from centre to centre, each supplied with single speed countershafts operated by a foot treadle.

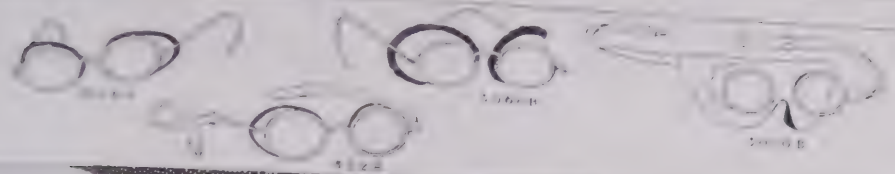
These machines can also be arranged with ¼ H. P. motor belted directly to each spindle, as shown on page 309 of the AOCo general catalogue. This is possibly nearest the ideal method, as no power whatever is consumed by countershafts, belts, etc., when the machine is idle. This so-called friction load ordinarily consumes a large percentage of the actual power. When a motor is used for each spindle the friction load is almost negligible.

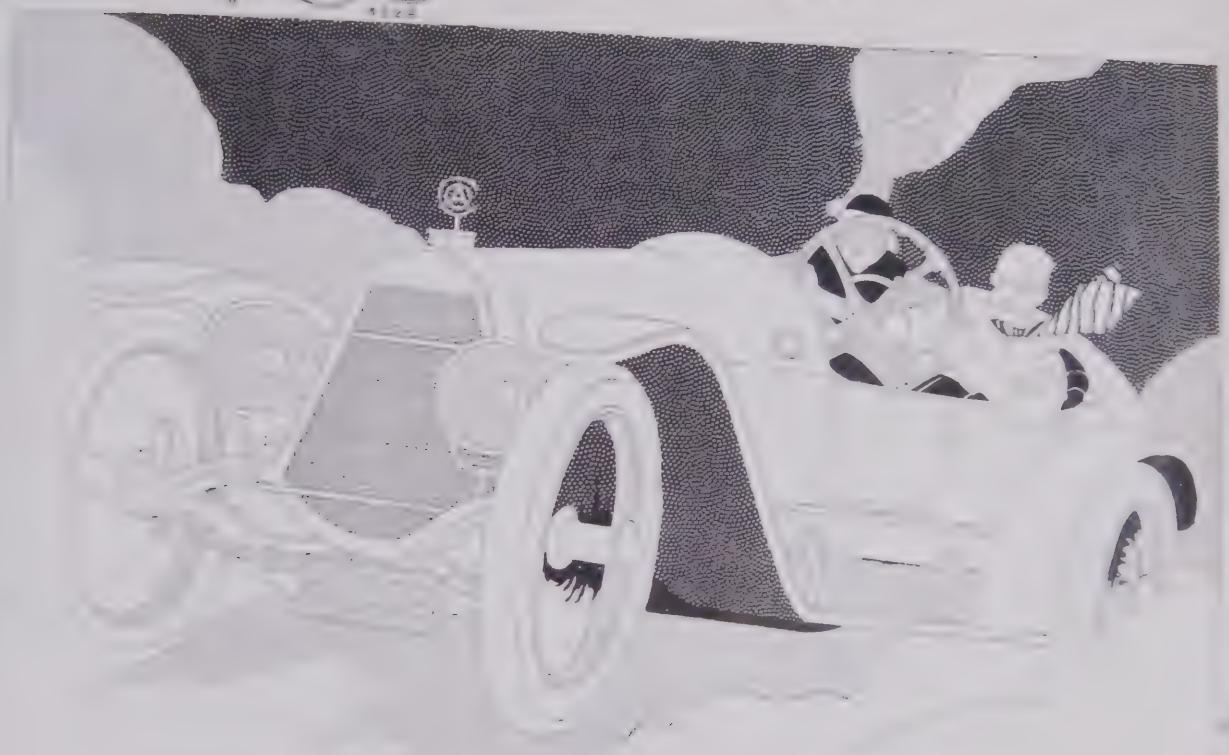
Write to your jobber or to us for special literature and full information about this AOCo M21 Surface Grinding machine. He will gladly furnish estimates for either style of construction and for any desired capacity.

Amoptico

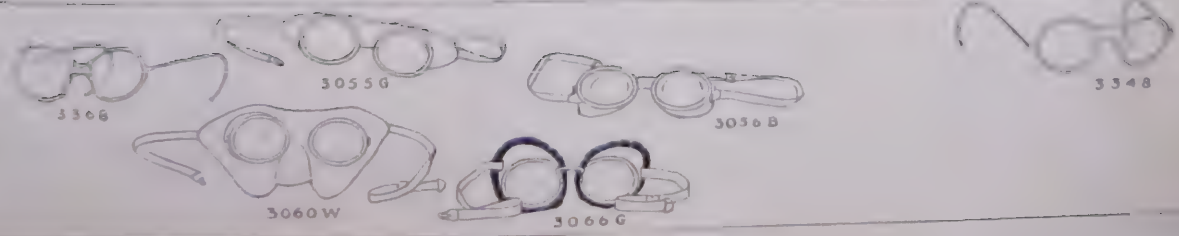
Published by the American Optical Company
at Southbridge Massachusetts

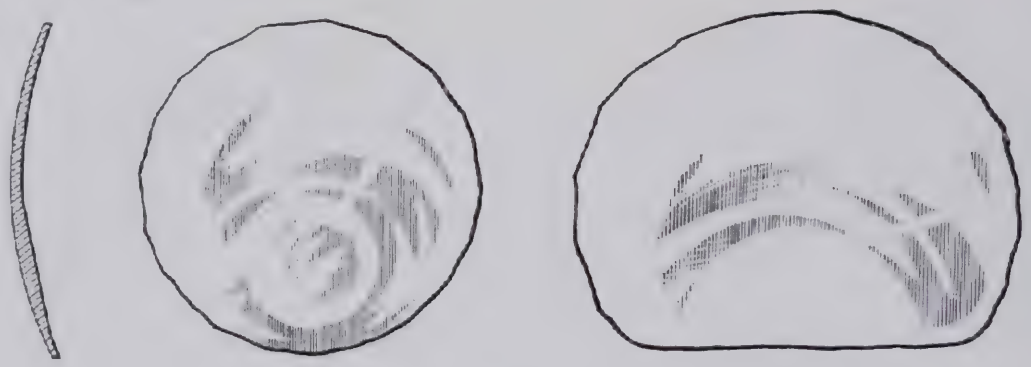
Vol. 3 June, 1914 No. III





Be sure to read
"The Story of
AO Co Goggles"
in this number





AOCo UNI-BIFO

REG. IN U. S. PAT. OFF.

Onepiece Ophthalmic Bifocal Lenses

THE PERFECT BIFOCAL. COVERED BY EXCLUSIVE PATENTS

A bifocal that stands as the goal toward which lens manufacturers have worked for years. Ground from one single solid piece of hard crown glass. The reading portion is practically invisible. There is no break in the smooth surface of the lens. In fact your customers can now enjoy every benefit of bifocal lenses with as much comfort and ease as can be obtained with single focus lenses.

AOCo Uni-Bifo blanks are made with two sizes of reading portions, 19 mm. (round) and 30 x 15 mm. (crescent), with the bifocal side entirely finished. The other surface may be ground for the proper correction and lenses ***made as thin as desired.***

You have wished for perfect bifocal lenses. Here they are, with sales possibilities limited only by your own efforts.

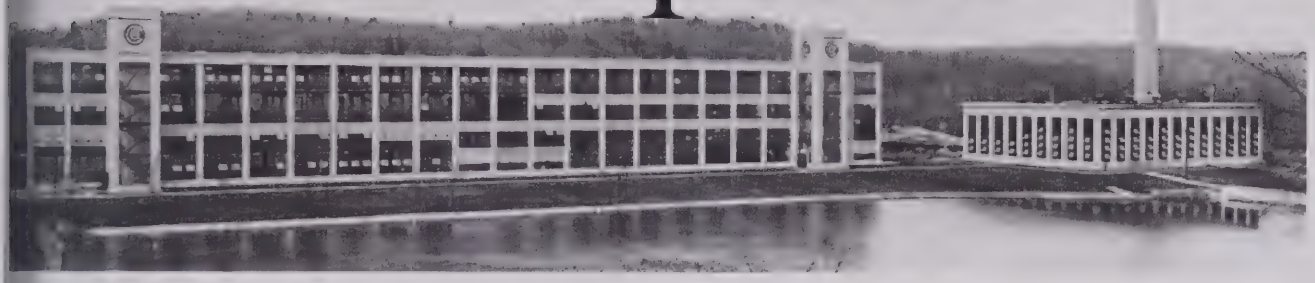
Note the following virtues AOCo Uni-Bifo lenses possess:

Scientifically produced to meet highest ophthalmic requirements.
Perfect bifocal ground from one piece of glass.
Bifocal surfaces perfectly merged.
Dividing line practically invisible.
No color troubles.
Thinner than any other bifocals.
Two sizes of reading portion available.
One side only to be surfaced.
Hard glass, scratch resisting.

Sample lenses may be obtained from Jobbers holding finishing licenses. Ask for ***AOCo*** Uni-Bifo lenses.

Send for the AOCo copyrighted Bifocal Protractor, with suggestions for finishing Uni-Bifo Onepiece Bifocals.

Amoptico



Why Strong Contra-Generic Lenses* of Equal Power Fail to Neutralize Each Other

Revised reprint from Annales d'Oculistique (English Ed.) November, 1895

By Charles F. Prentice, M.E., New York

Inasmuch as inquiries are frequently made of us with reference to the neutralization of Lenses, we have republished the following article written by Mr. Charles F. Prentice, M.E., of New York City. This article was written after most careful consideration and experiments of the writer, and we have accepted the conclusions arrived at as correct. Our Lenses are ground upon this principle and should be tested accordingly. In neutralizing we always hold the convex lens next to the eye. If Lenses are made upon the opposite principle, they should not be expected to neutralize with AOCo standards.—American Optical Company.

Some time ago Mr. George W. Wells, late president of the American Optical Company, Southbridge, Mass., requested me to give this subject attention, and, as it contains features of mutual interest to oculists and opticians, I have considered it of sufficient importance to give the results of my investigation publicity.

In ophthalmic practice it is customary to determine the power of a lens by what is known as "neutralization." It is here proposed to show why it is that this method is only strictly applicable to lenses that are weaker than 9 dioptries. The power of a lens, as is well known, is dependent upon three factors—the radius of curvature, index of refraction and thickness of glass. The latter we are taught to consider a negligible quantity, since it is generally infinitely small in proportion to the focal distances of lenses that are used in spectacles. This is only justified in its application to *concave* lenses, since all concave lenses, between 0.25 D. and 20 D., can be made of the same infinite thinness in the center. In convex lenses, however, we meet with an unavoidable increase in thickness, which becomes of sufficient magnitude in lenses above 8 D. to conflict with the hypothesis referred to. When the element of thickness is considered, we have the formula for bi-spherical lenses of equal curvatures:

$$r = f(n-1) + \sqrt{\frac{(nr - e)\, f\,(n-1)^2}{n}}, \qquad \text{I.}$$

*Lenses of opposite character—convex and concave. First used in a Monograph Dioptric Formulæ for Combined Cylindrical Lenses, by Charles F. Prentice, M. E., New York, 1888.

wherein r is the radius of curvature, n the index of refraction, f the focal length, and e the thickness, in contradistinction to the formula for neglected thickness, wherein

$$r = 2f\,(n-1). \qquad \text{II.}$$

It is therefore evident that the radius of curvature will be a different one for bi-convex lenses, in which thickness is considered, from that of bi-concave lenses, of the same power, having no thickness.

The accompanying diagram, Fig. 1, representing a bi-convex and a bi-concave lens of *identical* curvatures, clearly shows that they cannot optically neutralize each other, as they really only constitute the central portion of a much larger periscopic *convex* lens, and which our imagination can construct upon the dotted lines that are continued to their intersections at *a* and *b*.

The diagram also shows that the power of the imaginary meniscus must *increase* with an increase in the thickness of the bi-convex lens, because the anterior and posterior surfaces of the meniscus will be rendered more oblique to each other as their respective centers of curvature, c_1 and c_2, are separated to provide an increased thickness. The nearest approach to neutralization will therefore be secured when the centers of curvature, c_1 and c_2, are as close together as possible, thus making the bi-convex lens L exceedingly small and thin, as shown in Fig. 2.

The lenses in our trial cases are, however, too large

to secure even this *approximate* neutralization. Their diameter of necessity determines the thickness, which must increase with the power. For

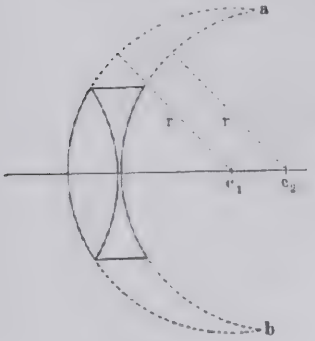


Figure 1

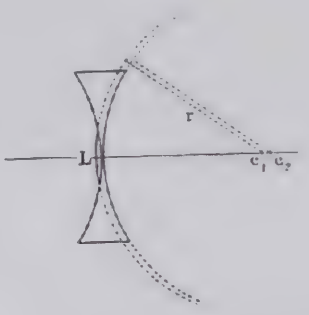


Figure 2

instance, in a 20 D. convex trial-case lens of 3.5 centimeters diameter we find the minimum thickness to be 0.75 centimeters. If, therefore, in Formula I., we place $e = 0.75$, $n = 1.5$, and $f = 5$ centimeters, we obtain 4.87 centimeters as the value of r, whereas, for a 20 D. concave lens, according to Formula II., we find $r = 5$ centimeters.

As the radius is shorter for the convex than lens for the concave lens of the same power, it is evident that their surfaces will actually only touch in the center, as exaggeratedly shown in Fig. 3.

Besides, the outer surface, s_1 s_1, of the convex lens will be even more oblique relatively to the outer one, s_1' s_2, of the concave lens, so that the lenses form the center of a stronger meniscus than shown in Fig. 1. Or, viewing it in another light: a parallel ray, i, that is incident to the concave lens, is refracted by it, passing into the convex lens, as if emanating from the virtual focal point, F, of the concave lens, which is outside of the focal point, F_2, of the convex lens, Fig. 4.

Such rays, e, will therefore be rendered convergent, instead of parallel, in passing out of the convex lens, showing that neutralization does not exist.

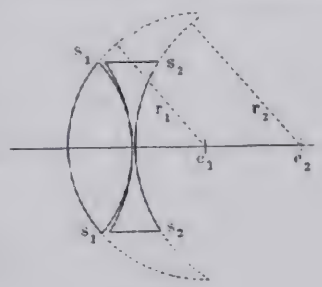


Figure 3

The focal distance, in infinitely thin lenses, is counted from a single point, s, on the optical axis in the centre of the lens, whereas in lenses of appreciable thickness it is counted from the *posterior principal point*, h_2, within the lens. In a bi-convex lens of equal curvatures, made of glass, with an index of refraction $n = 1.5$, it has been demonstrated that the principal points, h_1 and h_2, are separated by a distance equal to one-third of the lens thickness (†). It is therefore obvious that the focal distance of the convex lens will have to be increased by one-t of its thickness, so as to have F_2 and F *coincid* the purpose of producing neutralization.

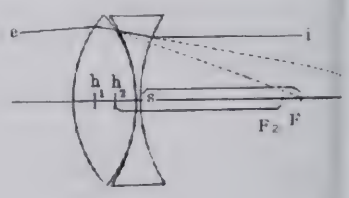
With a minimum thickness equal to 0.75 cm., must, consequently, add 0.25 to the *focal dista* 5, making 5.25 the focal distance of the convex l This corresponds to a refraction of 19.047 diopt Consequently, *a 19.047 convex lens of 0.75 cm. th ness neutralizes a 20 D. concave lens of no thick* To be more accurate, we should actually allow one millimeter thickness of the concave lens. T would result in the convex lens being even so what weaker than 19.047 dioptries.

However, according to Formula I., a 19.047 convex lens of 0.75 cm. thickness should ha radius $r = 5.121$ cm., so that the superposed neu izing lenses would actually touch each other their *edges*, instead of at the center, as exaggerat shown in Fig. 5.

Furthermore, any additional increase in the t ness of the convex lens will be associated wit increase in the distance $h_2 F$, and will therefore for a corresponding decrease in the power of convex lens to produce neutralization.

Thus, the tendency will invariably be to o estimate the power of the convex lens when an e is made to determine its power by that of a con one which neutralizes it.

Calculation shows that discrepancies in neut zation varying between 0.25 and 1 D. exist in entire series of convex lenses between 9 and 2



Figure

It consequently also follows that the indiscrim addition of lenses, so frequently practiced durin subjective method of examination of ocular re tion, is not permissible with lenses of high pow

In other words, lenses of high power are no capable of being algebraically combined than p of high power, a fault for which the practicabil the prism-dioptry was so severely criticised. The logic, therefore, applies to lenses that was ment in my paper on the Prismometric Scale (‡), t

(†) Müller Pouillet's *Lehrbuch der Physik*, page 160. Braunschweig, 1894.

(‡) See American Journal of Ophthalmology, St. Louis, Oct., 1

"The desire to multiply any *unit in optics* should be curbed by a knowledge of the fact that all the fundamental optical laws are based upon the assumption and acceptance of *values of limited magnitude*, and that there is therefore apt to be a point where *unreasonable* multiplication of an optical unit will contradict the actually existing optical phenomenon."

The general, though erroneous, impression that the entire series of corresponding contra-generic

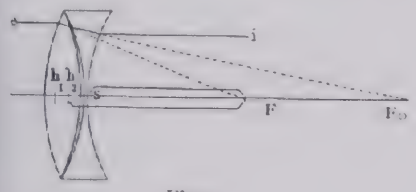


Figure 5

lenses should neutralize each other has gained such credence that lens manufacturers have allowed themselves to be swayed by this popular opinion, and as a result have justifiably adopted the principle of making the convex weaker than the concave lenses, so as to meet the demand for neutralization. As has been shown, a 20 D. convex lens should have a shorter radius than a concave one of the same power, yet examination of many trial cases will reveal the fact that the reverse is the case, when the surfaces are measured by a suitable gauge. We can, however, gain no reliable information regarding the power of a strong convex lens by measurement of its surfaces, since two lenses of the same curvature, but of different thickness, will not be of the same power. As the thickness increases, the power will diminish for one and the same curvature. This is shown in Fig. 6.

The incident ray, *i*, is refracted by the anterior surface of the lens *a b* in the direction *x* F_1, and by the posterior surface at *y* to the focus *F*. If the thickness be increased so as to place the posterior surface at *c d*, then *x* F_1 will be refracted at the posterior surface at *z* to F_0, parallel to *y F*, since the surface *c d* is of the same radius as *a b*.

The focal distance $H_2 F_0$, of the thicker lens, is not appreciably different from $h_2 F$ of the thinner lens; in fact, the difference between these distances scarcely amounts to 0.05 cm., for a curvature of 5 cm. in lenses of 0.75 and 1 cm. thickness. Nevertheless, such a difference would be appreciated by the eye in neutralizing. The question then arises: by what method should we determine the power of strong lenses? Indeed, nothing seems to remain but to measure them by a focusing screen upon a graduated bar, care being taken to count the focal distance from the posterior principal point *within* the lens. While concave lenses can be similarly measured, yet this is somewhat difficult, and not entirely satisfactory. The so-called "lens-measure" is indeed preferable *only for concave lenses*, since they alone are of negligible thickness, but for convex lenses above 8 dioptries this instrument is unreliable.

It will, however, be more or less inconvenient to

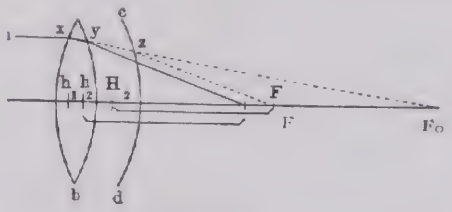


Figure 6

have individually different methods of measurement for convex and concave lenses. Unless, therefore, we are prepared to make some radical change, we shall do well to adhere to the practice of neutralization, bearing in mind the errors we commit by so doing. When convex lenses stronger than 8 dioptries are prescribed, and they are measured by neutralization with a concave lens, we should remember that they are always weaker than the dioptries indicated by the concave lens. In short, *the convex lenses in our trial cases are not what they are numbered in dioptries.*

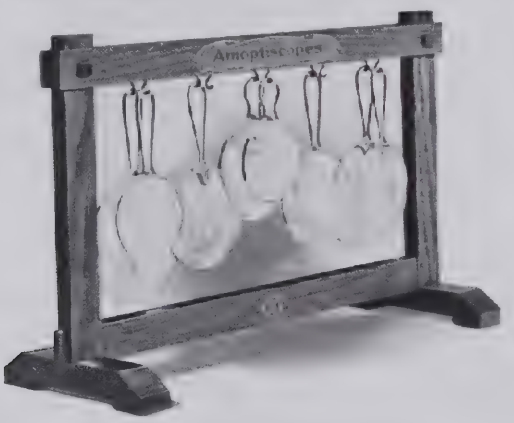
So long, however, as manufacturers are agreed that the convex lenses they produce shall neutralize with standard *concave* lenses, we shall at least have a uniformity which will ensure the convex lenses in spectacles being duplicates of those in the trial case; *provided*, also, that the convex lenses of any given number are always of the same uniform thickness. This thickness, in every instance, should be the least which can be given to the lens of 3.5 cm. standard diameter.

Send Your Suggestions and New Ideas to Us

We are always interested in the possibilities of new inventions along optical lines, and if you see any way of improving our present lines or think that some special lines added might be of advantage, let us know. Any new suggestions will be considered carefully, and all correspondence held in strictest confidence, so that the rights of the inventor may be carefully safeguarded.

Magnify the Little Things With AOCo Amoptiscopes

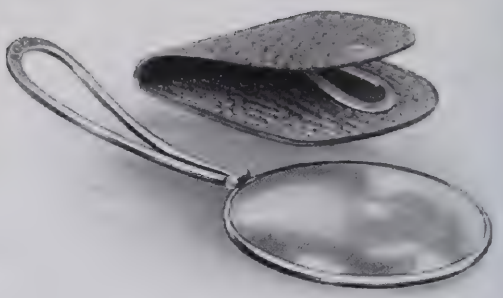
When mother looks for the splinter in baby's finger or examines a piece of crepe de chine that might look well made up á la Parisienne; when father tries to read a bit of fine print, or sister wants



Special AOCo Display Stand

to examine the geranium that is just opening, why then a magnifying glass is a pretty useful thing to have. So when mother or father or sister begins to look for one, then's the time you should have Amoptiscopes in your window or on your show case. We make a special fumed oak, wax finished stand, such as is shown above, to give you a favorable opportunity to show their lightness and convenience in various sizes. These stands are sold by your jobber at $1.25 each.

AOCo Amoptiscopes are made in both folding and non-folding styles. They are sold with flexible seal grain leather cases, and the prices quoted here include them. Order now of your jobber.



Patent Pending

AOCo Folding Amoptiscope No. 2952

WITH RIMS (including Cases)

Diameter	*Focus*	*Alumnico* Cat. No.	*Per Doz.*	*Gold-Fil* Cat. No.	*Per*
51 mm. (2 in.)	+ 10.00	1952 1962	4.60	3952 3962	
51 mm. (2 in.)	+ 13.00	1952 1962	4.95	3952 3962	
63 mm. (2½ in.)	+ 8.00	1952½ 1962½	5.35	3952½ 3962½	
76 mm. (3 in.)	+ 6.50	1953 1963	6.00	3953 3963	

RIMLESS (including Cases)

Diameter	*Focus*	*Alumnico* Cat. No.	*Per Doz.*	*Gold-Fi* Cat. No.	*Per*
51 mm. (2 in.)	+ 10.00	1972 1992	$6.25	3972 3992	
51 mm. (2 in.)	+ 13.00	1972 1992	6.60	3972 3992	
63 mm. (2½ in.)	+ 8.00	1972½ 1992½	7.00	3972½ 3992½	
76 mm. (3 in.)	+ 6.50	1973 1993	7.65	3973 3993	

FOLDING (including Cases)

Diameter	*Focus*	*Alumnico* Cat. No.	*Per Doz.*	*Gold-F* Cat. No.	*Pe*
51 mm. (2 in.)	+ 10.00	2952	$5.75	4952	

In ordering, state quantity, catalogue number and desired. Prices above include unlined flexible leather cas button flap.

Eventually—Why Not Now?

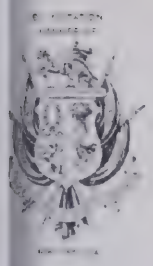


There is one very large national advertiser who continually uses the phrase "Eventually—Why not Now?" in its publicity. The expression seems so aptly to fit our own wishes in regard to that new general catalogue of ours that we hereby make bold to use it. Eventually you'll have an AOCo general catalogue, so why not now? It isn't one of those things which you can "do without for awhile" for we will send you one if you will send us your request on your regular business stationary or enclose business card. It will be a tremendous help t because of its beautiful illustrations, its cle scriptions, and its inclusiveness. No expens spared to make it the best work of its kin issued, and as a result it *is* the best. It sho given a prominent place on your desk.

Don't forget the new Kryptok folders w nounced in our April issue. Try circularizin mailing list with them. We will send a reas supply of them to you free, with your own imprinted on them. Requests have been com for them pretty fast, but we still have time to f own. So send it along to us and boom your K lens business. And be sure your next order g your jobber with AOCo Kryptok blanks sp

The $15,000 Window Dressing Contest is On!

This is the time to enter



Every Dealer handling AOCo products should enter the $15,000.00 Window Display Contest of the Rice Leaders of the World Association.

The national interest awakened by the widespread activities of the Association affords every dealer in American Optical Company products an exceptional opportunity to further the prestige of his store and to secure increased trade.

The Emblem of the Association has been put before the public in every conceivable way many millions of times. It represents the highest principles of business integrity. It standardizes the high quality of American Optical Company products and those of other Members of the Association.



All Members are known to have builded their business upon Honor, Quality, Strength and Service.

Your customers know this.

Your customers are aware that the goods produced by the AOCo, a Member of the Association, are desirable.

AOCo products displayed in your store with the Emblem will be at once recognized as produced by a concern whose business integrity is unquestioned.

Capitalize this enthusiasm and interest.

Show your customers that you deal in the products of the American Optical Company, a recognized leading manufacturer. Reap the reward of increased prestige for your business and, incidentally, secure one of the many cash prizes.

Briefly summarized, these are the reasons why you should enthusiastically enter the Rice Leaders of the World Association Window Display Cash Prize Contest:

1. An attractive window display of AOCo goods means increased trade.
2. It will gratify your customers to know that you also are interested in these Contests.



3. You will be able to help your customers with information about AOCo products with which they may not be personally familiar, which particulars they will require as contestants in the $10,000.00 Public Idea Letter Contest. This will be good business for you.

4. You will further increase the prestige of your store, by featuring the fact that you handle high-class products. Increased prestige is increased power for business.

5. Beyond the possibility of securing a valuable cash prize, you will receive from the Association an Album containing photographic reproductions of the 100 best Window Displays in the country. Such a book will be invaluable to you. You can use it as a textbook for making your future window displays. It will give you new ideas.

6. You will stand an equal chance of receiving one of the 500 valuable Cash Prizes, which range from $2,000.00 down.

7. You will have the moral satisfaction of becoming identified with a movement demonstrating to the World the desirability of HONOR, QUALITY, STRENGTH and SERVICE in Business.

Enter this contest and put your best efforts into a window display of AOCo goods.

The Story of AOCo Goggles



Figure 1. The start of the process. Inspecting wire gauze which is to be used for goggle screens. The gauze is received in large sheets, run through a machine which cuts it into narrow strips and is then cut out into shape. It is then taken to another machine where it is stamped out perfectly flat. Thus shaped it is ready to be bound around the edge and bent into its permanent curve.

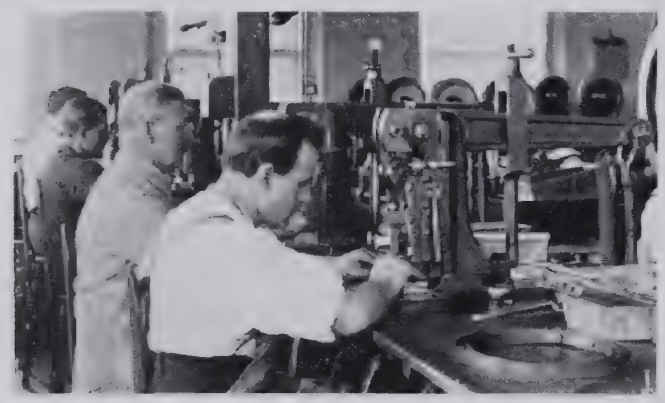


Figure 2. These are some of the old style foot presses which were used a few years ago to do all the stamping-out of parts. The stock comes in strips or sheets according to the size and shape of the parts which are to be cut from it. As the strips are fed under the die by hand, a foot lever is pressed down and the die is forced through the metal. An automatic machine now does most of this work.



Figure 3. This shows some of the delicate hand soldering being done. The man is soldering bridges and eyes together. A thin flame jets out with such a perfect mixture of air as to make it almost invisible. The parts which are to be soldered have already been "peened on"—temporarily fastened. They are then held in the left hand, while a tiny piece of solder is applied with the other. It requires long practice to do this soldering well.



Figure 4. This operation, shaping bridges, is not peculiar t goggle making, but is interesting because it looks so easy and really so difficult. It requires an eye trained to detect the smal differences in heights, inclinations, etc. The sheet appearing b hind the operator's hand is a diagram giving proper sizes, but he h become so expert that he disregards it entirely. Only a very fe men have the necessary training to do this work successfully.



Figure 5. After the soldering has been done and the parts bet to look like real goggles or spectacles they are trued up by the men. Before each of them is a blue-printed form showing t exact shape and size of the different kinds of goods. A pair pliers and a trained eye accomplish in a few moments what co not be done at all by an inexperienced person. It looks easy until you try it.



Figure 6. Here is a very ingenious little machine used "doweling"—inserting the pivots on which the temples swi A piece of wire is clamped into a handle held in the right h The wire is then inserted into the center of the large circular d shown here and is then thrust into the smaller hole as is being d in the picture. This shapes and threads the wire so that it screwed into the endpieces very rapidly.

The Story of AOCo Goggles (Continued)



Figure 7. A view of one of the assembling rooms. It is in this room that the doweling (Fig. 6) is done. When the temples have been attached and the frames are almost all assembled, the goggles are strung together on copper wire and gathered into bunches, preparatory to the nickeling process. The queer looking up-side-down bouquets near the girls are bunches of goggle screens which are all ready to have a coat of bright nickel applied.



Figure 8. This man is assembling goggle frames and screens such as are used on AOCo goggles No. 3026. At his right hand is a large box containing the screens. Before him are the frames. At his left just showing in their wooden tray are frames which are all finished with screens. As in most of the operations, this work requires a special knack only acquired as a result of long practice. The novice would make slow work of it.

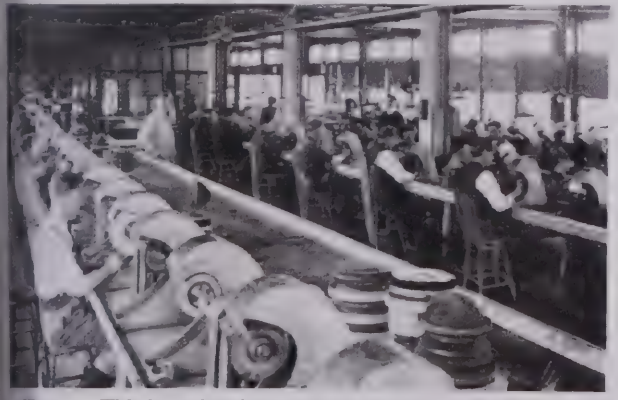


Figure 9. This is a view into one of the finest polishing rooms in existence, where frames, aluminum cases, etc., are given a brilliant lustre. A special forty horse-power motor supplies a strong suction behind each machine that whisks dirt away in a second. Go into this room at noon and you will see the faces of the workers as clean as at seven o'clock in the morning—a practical test of cleanliness all will appreciate.



Figure 10. A corner of the department in which the nickeling is done. The man in the picture has two bunches of goggle screens in his hands, just as they appear when taken from the solution. As they are immersed in the bath, however, they are separated in order that they may not touch each other and spoil the nickeling. All kinds of nickeling and gold-plating work can be done here.



Figure 11. This picture was taken in our "Lensdale" building, and shows men inserting lenses into finished frames. Before them on the white paper are the lenses, and finished goggles are shown in rows in the foreground. The men were working almost in the center of the building, yet notice how perfect the lighting conditions are. All goggles are sent to this department to have the glass inserted.



Figure 12. These girls are sewing the soft velvet ribbon around the edges of the screens and frames and attaching elastic bands. After going through this process they are sent to the inspection department, where after a final inspection they are packed and prepared for shipment. It is interesting to know that the AOCo No. 3026 goggle was first made only ten years ago, and the sale of them now runs into enormous figures annually.

Now For Comfortable AOCo Zyloware Goods

Are you making your strong selling talk these days on Zyloware spectacles? The kind that appeal to the tired business man because of their real solid "roomy comfort"? You know that's where the real use for Zyloware goods lies. They should appeal to a man in the same way as his slippers and his smoking jacket do. To be sure they have been, and still are, worn about the streets, but such wear is merely fashion's fad and has no permanency. It is their lightness and comfort which give them a lasting place among optical necessities. The special qualities which appeal most strongly to your customers are appearance and strength. Appearance depends primarily upon their coloring, and secondarily on their general shape and proportions. Their strength depends upon the qualities of the Zyloware itself and upon the solidity with which the parts are designed.



AOCo Zyloware Spectacles

We gladly invite a careful inspection and analysis of AOCo Zyloware goods. Such analysis will readily show why they will be easy sellers. They are made in assorted eye sizes and P. D's. Unless otherwise specified we regularly furnish assorted P. D's. and 40 mm. eye. Genuine AOCo Zyloware goods are stamped with a little AOCo gold monogram on the back of the left endpiece. Look for this mark on the goods you order of your jobber.

RIDING TEMPLE FRAMES

Cat. No.	*Color*	*Per Doz.*
R 117	Dark Shell	$7.5
R 127	Black	7.5
R 137	Amber	7.5
R 147	Light Shell	10.0
R 157	Crystal	8.5

STRAIGHT TEMPLE FRAMES

Cat. No.	*Color*	*Per Doz.*
R 113	Dark Shell	$7.5
R 123	Black	7.5
R 133	Amber	7.5
R 143	Light Shell	10.0
R 153	Crystal	8.5

ZYLOWARE GOGGLES

Cat. No.	*Description*	*Per Doz.*
R 617	Dark shell color with mi-coquille amber lenses,	$15.0
R 637	Amber color with mi-coquille amber lenses,	15.0
R 647	Light shell color with mi-coquille amber lenses,	18.0

The Great Grandaddy of AOCo Goggles

This goggle No. 3026 was originally made as an experiment. We knew what autoists wanted, and this was the model we designed to prove it. That was ten years ago. Now this AOCo goggle is one of the largest sellers in the country. You will find it worn wherever you go. It has proved itself to have just the qualities of comfort, protection and convenience that autoists like.



AOCo Goggle No. 3026

You may carry as large a line of goggles as you wish—of all shapes, sizes and designs; but the one goggle you *need most* is this No. 3026. There are satisfaction and profit in every pair. Order of your jobber as follows:

No. 3026 white metal with coquille or curved white or smoke lenses, per dozen $7.00; gold-filled with curved amber lenses, $12.00; fieuzal lenses, $13.00.

Here's Where We Do Business in New York

These are two photographs recently taken of the American Optical Company's New York offices.

Owing to the very large increase in business in New York it was necessary, in 1910, to establish a New York office at 15 Maiden Lane, on the twelfth floor of the Silversmiths Building. Business continuing to increase, on January 1, 1913, we moved to much larger quarters, and now occupy the entire Maiden Lane frontage on the fourteenth floor.





AOCo, New York

Our office is in charge of Mr. J. H. Bohling, who was connected with leading optical houses in New York City before his connection with the American Optical Company. Associated with him are Mr. Ferd Kropff and Mr. Dean Woodard, both of whom are also very well known throughout their territory.

The office has a complete line of samples of American Optical Company goods, and we hope that our many friends will make it a point to visit it and look over these samples when in New York. A more thorough acquaintance with the goods will be very much to your advantage and will be of great assistance in ordering from your jobber.

Is Your Kryptok Business Growing?

Are you doing the amount of business you should in Kryptoks? Your field for these lies all about you, waiting to be cultivated, but it is not the kind of field on which surface scratching will have much effect. Good, deep, honest plowing with every sort of advertising push at your command is what will bring real results. Lots of folks are going about very much as did Mrs. Jones's boy. This young lad was spied, by a neighbor, going about with a pair of glasses, and not having chanced to see him wearing them before, she commented upon it to Mrs. Jones when she met her on the street. "Well, you see," said Mrs. Jones, "They belonged to his poor father, and I thought it was a pity to waste 'em."

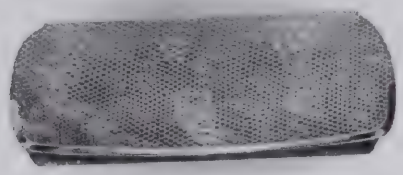
There are undoubtedly many people among your possible customers who are wearing old style glasses merely because they don't know of the wonderful improvements made in bifocals, and even if they do,



they hate to "waste" the glasses they are now wearing by purchasing new ones. Get in some good advertising work on Kryptoks—the kind ground from *AOCo* blanks, and you'll make your sales jump with a rush.

"Buy Your Christmas Presents Early"

Seems a bit early to be speaking of fall trade and next Christmas? Well, perhaps it is but the man who makes his arrangements for the holiday season now won't have to bother about them when the rush begins. We're taking fast hold of old Father Time's forelock and are illustrating here two cases



AOCo Case No. 705X-31C7

which you should be able to sell a bit later to especially good advantage. These two are not cases for the "masses"; rather, they are cases for the "classes," the buyers who like a good thing and can afford to pay for it. The number 705X-31C7 (no, don't think that's a football signal merely because we speak of Fall) case is one of the finest examples of the case-making art one would care to see. Its

New Style Case—Flat Cover



Old Style Case—High Domed Cover



model is the new flat-top design, which slides into a man's pocket without showing a lump. Its ends are fined down with such graceful curves that the case



AOCo Case No. 3252-21

appears even smaller than it really is. Genuine lizard skin is used for a covering, and a band of either sterling silver, gold-filled or 10K or 14K solid gold is used to protect the edge of the cover and add distinction to the appearance of the case as a whole. The lining is the best quality of gray suede, blending harmoniously with the coloring of the lizard skin.

The second case illustrated is for spectacles, mate on the same popular flat-top model. Its number is 3252-21. Covered with genuine seal skin and fitted with a gold, gold-filled or silver band on the cover, makes a rich appearing case that should find favor with your particular customers.

The advantages of the flat-top model cases may be readily seen from a glance at the outline drawings shown here. The awkward-appearing bump in the center of the cover is done away with entirely, making neater cases that are much more comfortable to carry.

Send your orders in to your jobber now for these models.

Get The New AOCo Trial Set Catalogue

Are Trial Sets interesting you just about now? If they are you need a copy of the AOCo Trial Set Catalogue just completed. It is a handsomely printed book containing a complete description of AOCo Trial Sets, Trial Frames and Accessories. The choosing of a good Trial Set is extremely vital to your work, for a slight error in the grinding of the lenses means an error in your results. The AOCo takes pride in the unusual accuracy with which its Trial Sets are made. To use them is to guarantee your testing and neutralizing results against mechanical inaccuracies. Write for this catalogue and give them a thorough investigation.

"Many thanks to you for the lantern slide, and also for all the other matter, as the good it has done I cannot estimate. If it does others as much good as it has me, you will have all kinds of trouble in filling orders for your goods."—E. S. Lichtenberger, Reading, Pa.

What Do You Think of This?

This is a copy of a notice we received recently from the Peerless Optical Company. These notices were sent to their customers. Comment from us would be superfluous.

IMPORTANT

Beginning February 1, all Rx orders specifying gold-filled fra will be filled with the American Optical Co.'s new 14k frame, ⅛ 14k bridge and temples, and the price will remain the same charged by others for inferior makes of 12k frames. The frames are unquestionably the best filled frames produced in country and have the guarantee of the American Optical back of them. In the skeleton mountings we shall use the grade of goods with the ⅛ 14k bridges. This will give you only more gold but 2k finer gold in each frame. We are using the best raw material and stock that money can buy, no temptation of how cheap, but how good.

We have cut away from the multitude of small manufactu whose only inducement is lower prices, and are confining selves to the products of one company whose name for fifty has stood at the head of all that is to be said of optical goods, American Optical Co.—Peerless Optical Co., Evansville,

Amoptico

Reg. in U. S. Pat. Off

Vol. III June, 1914 No. 3

Published Monthly by

American Optical Company

1833-1914

Channing M. Wells, President — Albert B. Wells, Treasurer

J. Cheney Wells, Vice-President and Secretary

General Offices and Works

Southbridge, Massachusetts, U. S. A.

New York . . . 15 Maiden Lane
Chicago . 122 S. Michigan Boulevard
San Francisco . . 140 Geary Street
London . 39, Hatton Garden, E. C.

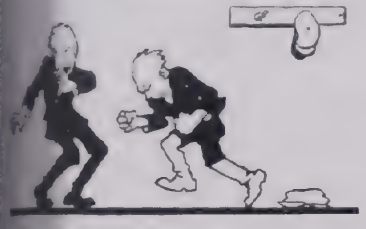
Cable Address: Amoptico, Boston
Western Union Code used

Manufacturers

Spectacle and Eyeglass Frames, Mountings and Material, Eyeglass Chains, Automatic Eyeglass Holders, Trial Sets, Trial Frames and Accessories, Automobile Goggles, Lenses, Spectacle, Eyeglass and Goggle Cases, Optical Machinery, Tools and Supplies, Etc.

Copyright, 1914, by American Optical Co.

Permission to reprint articles granted on request



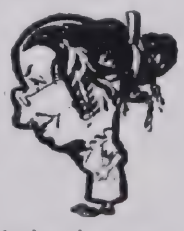
It seems to be human nature to fall into little ruts and habits—bad ones, too, for the matter of that. Do you remember, when you went to school, how you always had a certain hook in the coat room on which you habitually hung your overcoat? And how you resented it when anyone else inadvertently made the mistake of hanging his overcoat in your place? Or did you ever notice how in an office men fall into a routine in little things which saves a certain amount of mental effort?

This same principle holds true in the selling world. After an optometrist has become established in a locality he insensibly becomes so familiar with the class of trade he secures that he assumes a frame of mind in which he expects to secure that certain class in all cases, and is disappointed or very much surprised, as the case may be, when some sale throws him out of the rut for a while.

An instance of this was a case that occurred recently in New York City. An elderly lady entered an optometrist's store and asked to be shown a Varsity Style Eyeglass. The optometrist, mentally deciding by her dress and by the trade he was accustomed to carry on that she would want a good quality, gold-filled frame, offered her various styles, as she wished. Finally she picked up one pair, remarking: "That's the style I want, but haven't you got it in 14 Karat Gold?" It so happened that he did have, with the result that he made a sale amounting to $25.

It is not to be expected that this can happen often. But the wise salesman always starts his customer at the top of the price ladder, knowing that it is easier to make a large sale in that way than by forcing a continually better grade of goods on him. The habit of mind which leads anyone to start with the *average* priced article without regard to individual cases, is much to be deplored. After hearing the merits of the best made eyeglasses explained, a customer is not so readily satisfied with a medium or low grade.

Make it a practice to start on the highest plane you can when starting your sales talks, and keep away from the "average price" rut.

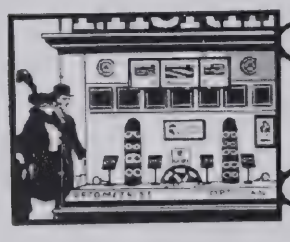


ONE of the most general weaknesses in the optical business is the fact that outside of those who manufacture optical supplies or handle them in wholesale quantities, there is only a comparatively small percentage of men who really have an adequate knowledge of them. Certain facts which are easily learned from experience, such for instance as the fact that one line of goods may be usually relied upon to have a higher temper or a stronger spring than another line, are, of course, commonly known. But the comparative value of various types of construction, the methods by which certain results have been achieved, the *reasons* for this or that are not generally known. This fact explains the sale of inferior goods and the dissatisfaction which usually results. Unless you are acquainted with the reasons behind the superior construction of Fits-U Eyeglasses, you are very much at a disadvantage both in buying and selling: in buying because you are not prepared to answer the arguments of the silver-tongued salesman who would sell you the just-as-good article that promises such enormous profits; in selling because you cannot clearly explain the points of excellence which will appeal most strongly to your customers.

Do you know why we make an Ovalex Spring? Can you explain the reason for the patented AO-Washer on the post screws? Can you tell of the extreme care taken by the American Optical Company to ensure a definite standard of quality? All these points may be made strong sales arguments when used by the man who is thoroughly familiar with them. And they are *so* much more potent than the ordinary statements that the spring will last well, the washer will help to secure smooth action, and the material used is gold-filled, or solid gold, as the case may be.

It is always a pleasure to be waited upon by a man who knows the story of his goods, whether those goods are shoe strings or eyeglasses.

If you have not asked for an AOCo general catalogue yet, send in a request for it. You will find it a veritable storehouse of information. Be sure you are on our mailing list to receive Amoptico. Follow our trade paper advertising. In this way you can work toward a better understanding of AOCo goods. And when you know as much about them as we do, you will know why we can say "leaders of the world."



NEW GOODS *for* *up-to-date* DEALERS



FITS-U LUXE

(PATENTED)

The Eyeglass With Fixed Lower Guards

Well, the new Fits-U Luxe Eyeglass is successfully launched on its voyage to public approval, and is making even faster headway then we had a right to expect. When you make a handsome-appearing eyeglass, you can find a few buyers; when you make a solidly-constructed, simply-designed eyeglass it isn't hard to find more buyers; but when you combine these qualities in an eyeglass, that is *scientifically designed* to give a maximum of good looks, wear and comfort, and that is far in advance of any other styles made, it doesn't need such a very large amount of "hollerin" about it to get every possible purchaser on its trail in a hurry. At any rate, we're proving that right now with the Fits-U Luxe eyeglass.



A New Fingerpeice Eyeglass. We Own Exclusive Patents on This Idea

As you know, the principle of the Fits-U Luxe eyeglass is that the weight of the eyeglasses should be borne evenly on the sides of the nose, without any spring pressure, by fixed lower bearing pads, and the glasses should be prevented from slipping or tilting forward by the action of moveable upper guards actuated by fingerpieces and the Ovalex spring. It is not necessary, in the Fits-U Luxe, for the spring pressure to hold the weight of the glasses. The result is that a very much lighter pressure than is usually required is sufficient to retain the glasses safely and comfortably in place.

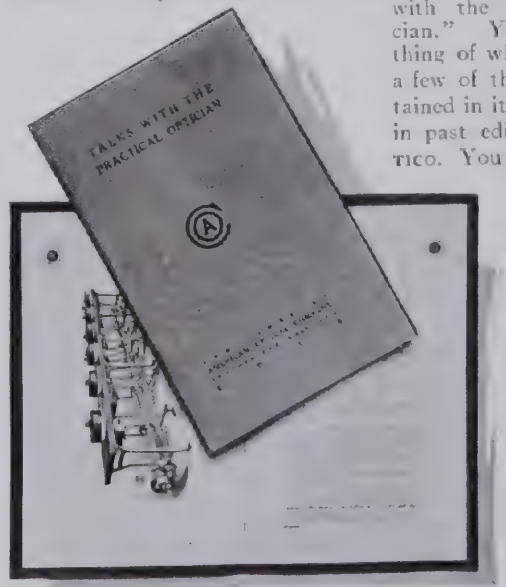
Here is a point, too, which from the standpoint of optical efficiency cannot be too strongly emphasized. The fixed lower bearing pads, which are adjusted by yourself to conform exactly to the peculiarities of nose shape which each patient has, ensure the glasses always being returned to the proper positi with lenses in exact alignment and centre.

It is not often that an opportunity presents its to get in such good advertising work as the n Fits-U Luxe eyeglass offers. It is new, it is based a scientifically correct principle, it is more comfo able than any other, it has individual constructio features, it is different from anything else on t market. Every dealer with real bu ness acumen will take advantage this opportunity, and sell his custo ers Fits-U Luxe eyeglasses, that make them enthusiastically his o so far as all future optical busines concerned. Here are the prices which your jobber sells them. He welcome yourorders, and your custo ers will welcome the FITS-U LU

No. 03121 Fits-U Luxe Patented Ovalex Spring	*Trade per*
1-10 12K Gold-Filled mountings, Complete,	$
10K Gold mountings, Complete,	

Announcement Extraordinai

We're at it again, with brains and printing presses, prin ink and ideas. The result this time is a revised edition of the booklet which proved to be very popular a short time ago: "T with the Practical cian." You know thing of what they a a few of the "Talks" tained in it have app in past editions of rico. You could go way and worse lo for any reference which co so much right soli essary i mation. lenses ar problems arise in ing them book is by an aut on lense is thore



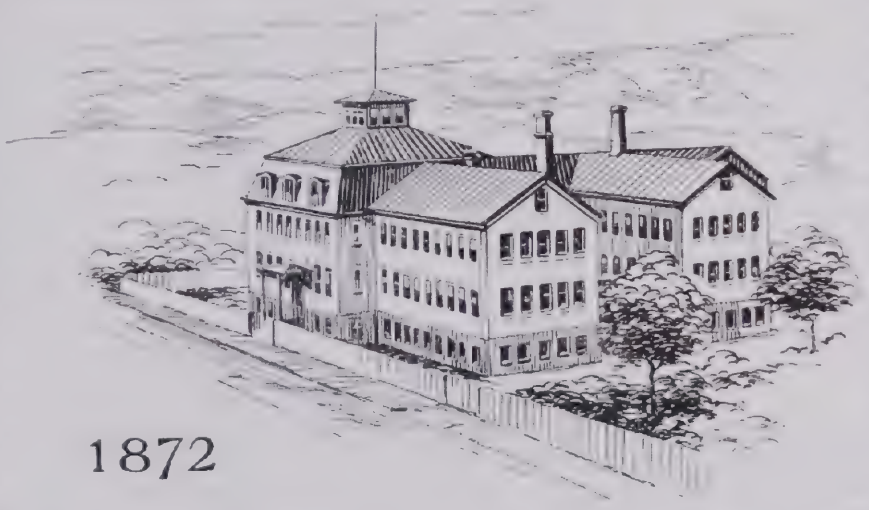
familiar with the everyday problems of optical shops.

This booklet will be sent free to any optometrist or o who is interested in these and similar problems. It c information that may save you any amount of time and Send us a request for it on your regular business sta or enclose your business card.

Gold and Silver Spectacle Making in the Early Days

By An Old AOCo Employee

At the time of which I am writing there were but few styles of gold and silver spectacles made, and the sizes and shapes of eyes were as follows: octagon (two sizes); oblong (one size); and in the oval but two sizes—regular, which conforms to our present No. 3 eye; and the long eye, which was the same as the No. 2 eye of a few years back. (Difference of 11 mm. between major and minor axis.) These were the eyes in common use. Of course even then there were exceptions, but these exceptions were always considered as special.



1872

The bridges in these goods were also limited in their variety, there being the C bridge in both straight and curled foot, but in two depths only. The X and K bridges were used principally on special orders.

The C bridges were all made from oval wire and not reduced at the ends, as at present. The workman was given a coil of eye-wire, a coil of bridge-stock, a length of endpiece and joint stock, together with a list of the number of pairs of a certain style he was to make, and this same list or order contained a notation of the kind and the focus of the lenses to be set in these frames.

After selecting the desired former and placing it in the jaws of a vise, he slipped the coil of eye-wire down over the end, and, after inserting the loose end of the wire in a hole in the former made for this purpose, began the process of winding the eyes by passing the wire from hand to hand around and around the former, occasionally pounding the coils down against each other with the edge of a wooden mallet, until he had formed enough eyes to fill his order.

This former, filled as it was, was next placed in a pair of tongs and by careful manipulation in an open charcoal fire was raised to a sufficient heat to ensure the setting of the wire to the shape of the former; and, after cooling, a mark was made the entire length of the former where the opening in eyes was desired. The cutting was done in most cases with a pair of hand shears after the coil of eyes was removed from the former; but sometimes this severing was done with a fine hand saw and the corner of a bench-pin for a support.

Each workman had on his cutting pliers marks at a position just the right distance from the jaws to give him the stock when severed from the coil that was the right length for a desired nose-piece.

These were next placed in a tool held in a vise, and bent up one at a time into a shape that would represent the arch of the bridge but with long feet or ends sticking out at right angles, like a hat brim. These ends were then cut off at a desired length either for straight foot or curled bridges, and the curl was made by bending this end around one jaw of a pair of round-nose pliers. Having made the eyes and bridges, the next step was to solder the ends of the eyes together. After soldering, each eye was leveled up on an iron bench weight to take out whatever twist might be caused by crooked wire or the spiral of winding. This same process applied to both round and flat eye-wire.

The flat eyes were next placed on a wooden former and with a fine flat file all streaks that were produced in the process of drawing this wire were removed.

Now, after this bending and hammering, it was necessary to again anneal these eyes, which was accomplished by placing them on a flat piece of iron (usually an old stove-lid) and again bringing to a heat sufficient to take out any tendency to spring that might have been produced in the previous process of hammering and bending.

The next step was to flatten a spot on the nose-piece so as to make a good connection, if the eye were flat; or a groove in this nose-piece if the eye were rounding in form; either of which was made with a hand file.

Clamping the bridge and eye together with a steel clamp extending over from the inside of one eye across the bridge to the inside of the opposite eye like a pair of ice tongs minus the handles, the workman soldered them by the aid of a mouth blowpipe and the light of a whale-oil lamp.

Each foot of the bridge was then bent so as to give the inclination of the crest of the bridge, and after accurately leveling and aligning they were ready for the spotting (or flattening) for the seat of the end-piece, which was done with a hand file while the eye was held on the corner of a bench pin.

Each end-piece was severed from its long strip with a hand saw and a joint for this end-piece handled in the same way.

The next process was to take two or three short pieces of fine binding wire, pass them through the inside of the eye, and bend both ends between the thumb and finger of one hand while with the other the piece of end-piece stock and its joint were placed in position at the point flattened on the eye, and between those ends of the binding wire protruding beyond the end of thumb and finger.

The ends of the binding wire were bent past each other and given a twist with the thumb and finger, and by careful manipulation of the ends of the binding wire in a pair of pliers and by just the right pressure of the thumb and finger holding the eye stock, end-piece, and binding wire, a sufficient tension was secured to hold all together during the process of soldering. If anyone thinks it is easy to bind an end-piece on with wire, let him try it.

In cutting off the joints for the end-pieces, a little length was always allowed so that if there were any slippage in soldering there would still be enough of the joint to cover the end-piece.

This was all filed down together with the sides of the end-piece until the standard width was gained, and after prick-punching, the process of lathe work on this end-piece was undertaken.

It was first drilled and counterbored to receive the screw-head, tapped in a hand tapping machine, and, after sawing open with a hand saw, was milled at the joint to receive the temple end of this hinge. The power for the lathe work had recently been changed (1868) from foot to our regular transmitted power, but the lathe itself was a very crude form.

The polishing of these fronts was done on leather-covered wheels, and for what we called wet polishing a mixture of ground rotten stone, ground pumice, and oil was used.



The AOCo Plant To-day

All the lens setting at this time had been divorced from the regular spectacle making, and was done for this department by Horatio Horton.

While the lenses were being set, the workman proceeded with the making of temples for these fronts. The jumpel for the butt of the temple was held in a vise, and after the insertion of the temple between the upper and the lower halves the plunger was struck a blow with the hammer to form the temple butt in a shape to receive the joint. The joint was held in place, while soldering, with a piece of steel wire bent like a clothespin.

The process of straightening and removing the concave and convex surfaces left by the cutting die was by planishing stake, and hammering.

After filing to take out all die marks, the temples were carefully scraped to remove the file marks, when they were ready for the polishing wheel and the use of the same mixture for the polishing employed for the fronts. After the lenses were set and temples polished, the temple joint was milled to fit each individual end-piece. The rivet was inserted, and after being driven in sufficiently tight to give the right tension on the temple was cut off and the end-piece filed for finishing.

The polishing of this end-piece was started by what was called "buff sticking." The buff stick, a length of wood covered with a piece of military buff leather, and charged with pumice, was thoroughly rubbed over the inside of the end-piece and the inside of the joint.

The lap-wheeling of the sides of the end-piece was done on a sole-leather surface and was very far from the perfect lapping of to-day; but that the owners had this present day lapping in view can scarcely be doubted, from the fact that I have seen in a copy of their shop formulae three distinct recipes for metal lap wheels; however, it was not until about 1898 that this process was brought to its present state of perfection.

Following the polishing and washing, each man assorted his own work for its different focus numbers and after stamping for the focus number it was turned over to the shipping department for the bending of the temples. If the gold goods were six or

eight karat, they were subjected to a baking process to give them a richer color.

The temples used at this time on gold and silver goods were the straight temple, band slides, and Jack Downing slides. Not until the early part of the "seventies" were there any riding bow spectacles made in Southbridge, and as late as 1875 there was but one man on this class of goods, which were made only in frames. The frameless riding bow was in process of development at this time.

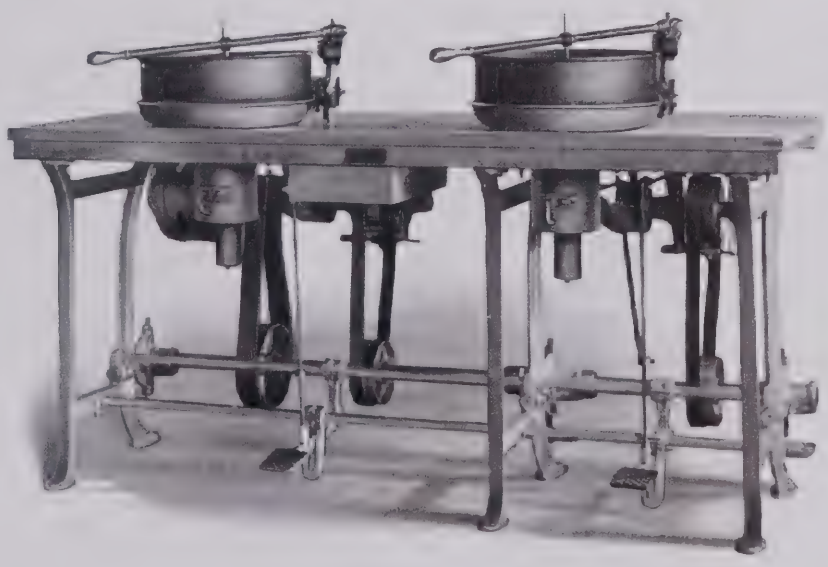
It had long been realized that both the quality and the quantity of goods could greatly be improved upon if one man did one thing and another man another thing in making the spectacle; but there was no attempt at specializing in the gold spectacle making until the early "seventies," when a battery of special lathes and the eye-sawing machine were built in the shop for the purpose of doing the lathe work on gold and silver spectacles, and put in charge of the late H. N. Carpenter.

They were a beautiful piece of work, and on a visit I made to the works in 1898 I saw these same machines still in operation. All had hardened cone bearings, concealed belts, and were arranged to economize in every way the waste of gold—a lasting monument to the late George W. Wells, mechanical genius, as well as an example of the thoroughness with which he builded.

The next subdivision of the work on gold spectacles was the divorcing of the temple making from the other work. While it was not at first acceptable to the employees as it cut down the aggregate price of production, each man earned more the first month it was put into operation than he had ever earned in the same time, and the class of work was superior to what it had been.—*William Bowker.*

AN UP-TO-THE-MINUTE BENCH SURFACE GRINDING MACHINE

NUMBER
M 21



NUMBER
M 21

Made to meet the demand for a simple, inexpensive, surface grinding outfit that will *do the business*. Benches thirty-six inches long may be furnished with a single machine, or in batteries of any required number.

A strongly constructed, efficient, space-saving machine, that will supply a maximum of results with a minimum of running expense. For bench fitted with AOCo M 21 surface grinding machines, spindles spaced 30" apart, with main shafts, countershafts and belts complete, without motor, $68.75 per spindle. Cost of AOCo M21 machine equipped with 110 or 220 volt alternating current 60 cycle single phase motor for each spindle belted direct, $102.65 per spindle; or $108.65 for motor arranged for 115 or 230 volt direct current.

For further particulars write for our circular explaining the machine more fully, or write direct to your jobber.



SELLING *the* GOODS

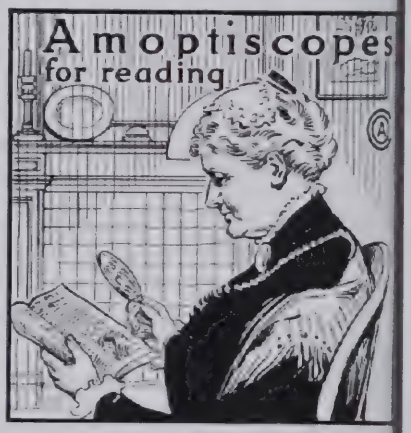


How Do You Like These Two?

"Variety is the spice of advertising" might well be a revised version of the old adage with which we are all familiar. We are applying this to our dealer help service work at any rate, and here is the latest evidence of it—two brand new newspaper electrotypes advertising Kryptok lenses and AOCo Amoptiscopes. They are as up-to-date and snappy as the goods themselves. With each electrotype we send a sheet containing six changes of copy arranged so as to be sent to your printer and leave a minimum of work for yourself. We have quite a fami of electros now, from the little baby No. A 22, on one inch deep, to the larger ones, running up to fi and six inches double-column width. These particular ones should prove to be right in line with your own requirements now, for both Kryptok lenses and Amoptiscopes are in such demand. If you can use either of these electros, just drop us a line telling us so, and we will start it on its way to you at onc



AOCo Electro No. K4



AOCo Electro No. A27

New Signs Advertising Opifex Bifocal Lenses

We are now ready to help you push your Opifex Bifocal Lens sales with two attractive new signs. One is arranged as a transparency, 5½ x 7¼" large, which may be attached to the glass of your show window or glass door panel, either on the inside or outside. No trouble to attach; merely wet the sign and place it on the glass, smoothing it into position. It will maintain its original brilliancy and freshness in spite of the weather.



No. 10W1

The second sign, also in full colors, is 6" x 8", and has a prepared surface which may be cleaned with a damp cloth whenever necessary. Supplied with a substantial easel back, which makes it suitable eith for window or show case display.

If you are selling this popular, medium price bifocal, we will be glad to supply you with either both of these new AOCo Opifex Bifocal Lens sign free of charge.

The Best Uni-Bifo Onepiece Bifoca Folder Out

It Has Snappy Copy and a Real Selling Punch

"Do you remember Poe's story of the man who was frighte out of his wits by seeing a huge monster coming out of the w near his home? He discovered that the monster was a comm house-fly crawling across the window pane near his eyes wh were focused on the distant woods. His eyes had played hi trick."

That is the first part of the "copy" contained in this new U Bifo Onepiece Bifocal circular, and the rest is just as intere ing. It carries its message of Uni-Bifo Onepiece Bifocal periority with a force and conviction which will go far to convi the reader of the truth of the facts discovered.

If you are using American Optical Company goods; if you specify *AOCo* Uni-Bifo Onepiece bifocal blanks, you are entit to receive a reasonable supply of these folders *free*. When write out your next Uni-Bifo Onepiece Bifocal order tell jobber you must have *AOCo* Uni-Bifo Onepiece Bifocal add, "I can use a reasonable supply of the new AOCo Uni-B Onepiece Bifocal folders." He will be glad to see that they sent to you.

WHAT DEALER-HELP SERVICE REALLY IS



AOCo Newspaper Electrotype No. A21



AOCo Sign No. 14W3
Full Colors, 11" x 14"



AOCo Sign No. B79



AOCo Colored Lantern Slide No. 10



AOCo Window Sign No. 11W1
Two Colors, 10" x 14"



AOCo Counter Pad No. 17M4

ADVERTISING costs money—a perfectly trite remark but none the less true for that reason; and the optometrist or optician who contemplates advertising is often rather staggered to see how much it does cost. Good advertising, however, is not expensive, for if it brings a larger business it ceases to be an expense. It becomes an exceedingly profitable investment. But even profitable investments require an outlay of money, and that is the reason for the existence of the AOCo Dealer Service Department.

One of the heaviest expenses in advertising is the preparation of the necessary materials; the newspaper electros, the window cards, the lantern slides, the leaflets, etc. The AOCo Dealer Service Department is designed to help you avoid this expense by supplying different forms of advertising material free of charge in reasonable quantities. Our reasons for doing this are not philanthropic. When the advertising matter we supply you brings results, and you sell more Fits-U Eyeglasses, we benefit. It is a co-operative plan for increasing both your business and our own.

These illustrations show a few of the forms of advertising we hold at your disposal. We have many others. Some of them should benefit you. If you need a window sign, a newspaper electro, a lantern slide, folders or blotters advertising the fact that you sell AOCo goods, write us for them.



AOCo TRIAL SETS, TRIAL FRAMES AND ACCESSORIES

A reputation for accurate trial sets cannot be gained in a year, o two, or three. It can only result from a standard of excellenc maintained over a long period of years.

The American Optical Company has been making trial sets for over thirty year The experience thus gained, together with its unequalled corps of lens expert and its wonderful manufacturing facilities, has enabled it to build a world-wid reputation for accurate trial sets.

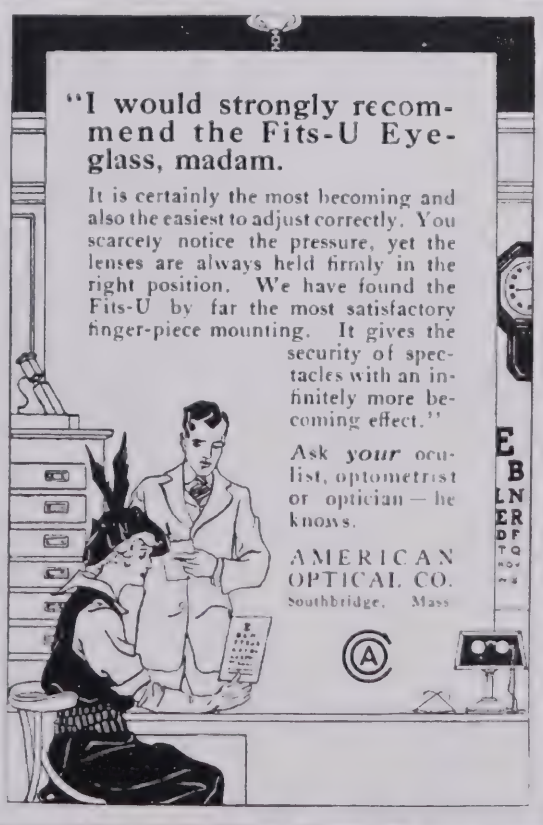
Every Trial Set that bears the AOCo trademark is backed by the Company full guarantee.

Made in all sizes, all styles, and for all prices. Tell your jobber you want one of the new AOCo Trial Set Catalogues, containing prices and a full description of the AOCo line. You should investigate thoroughly.

Amoptico

Published by the American Optical Company
at Southbridge Massachusetts

Vol. 3 September, 1914 No. VI



Look for this Ad in the November Magazines

What is Your Verdict on these Cases?

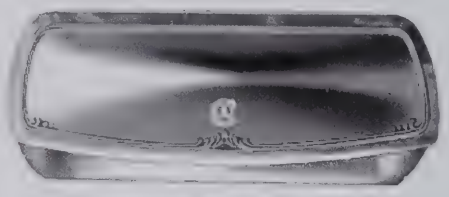
Mr. Optometrist—Optician, four cases are before you to be decided upon. The Manufacturing Court has pronounced strongly in their favor; in fact, says they have more good points than any others of a similar nature. The Court of Increased Sales has said that popular favor is with them. As the Court of Last Appeal, what is YOUR verdict Mr. Optometrist—Optician?



AOCo Polished Aluminum Case No. 328 P.A.

Strongly made, self-closing aluminum case, lined with good quality gray silk velvet. All edges are very carefully smoothed and buffed. A light, attractive case anyone will be proud to carry. Your jobber sells as follows:

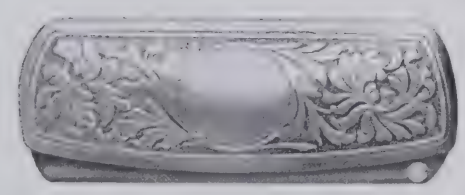
Cat. No.	Description	Per Dozen
No. 328 P.A.	Spectacle size	$3.50
No. 706 P.A.	Small Fingerpiece size	3.25
No. 708 P.A.	Eyeglass size	3.25
No. 716 P.A.	Large Fingerpiece size	3.25



AOCo Polished Aluminum Case No. 328 P.A.2

A handsome design on the cover of this case adds just the desired touch of distinction without being too ornate. Self closing like the others, and solidly made throughout. Cases such as these make delighted customers. Your jobber sells them:

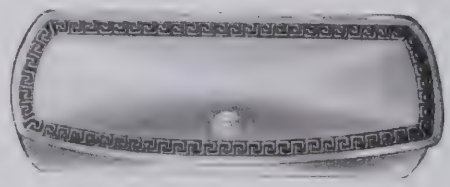
Cat. No.	Description	Per Dozen
No. 328 P.A.2	Spectacle size	$3.50
No. 706 P.A.2	Small Fingerpiece size	3.25
No. 708 P.A.2	Eyeglass size	3.25
No. 716 P.A.2	Large Fingerpiece size	3.25



AOCo Polished Aluminum Case No. 328 P.A.1

A beautifully designed specimen of the case-maker's art. Made in No. 328 spectacle and No. 708 eye glass size, oxidized either in red, green, blue or black. Silk velvet lining colored to match. Put them in your window with one of our special display signs, sent on request. From your jobber as follows:

Cat. No.	Color	Per Dozen
No. 328 P.A.1	Without oxidization	$4.25
No. 328 P.A.1 ox.	Oxidized black	4.50
No. 328 P.A.1 ox. 1	Red; ox. 3, green; ox. 4, blue,	4.50
No. 708 P.A.1	Without oxidization	4.00
No. 708 P.A.1 ox.	In any of above colors	4.25



AOCo Polished Aluminum Case No. 328 P.A.3

The classical design on this case adds dignity and beauty to its handsome shape. You will make no mistake in selling them. Spectacle sizes only. Ask your jobber:

Cat. No.	Color	Per Dozen
No. 328 P.A.3	Plain	$3.50
No. 328 P.A.3 ox.	Oxidized black	4.25
No. 328 P.A.3 ox. 1	" red	4.25
No. 328 P.A.3 ox. 3	" green	4.25
No. 328 P.A.3 ox. 4	" blue	4.25

Try Them and See. Sales Talk Louder than Claims

Amoptico

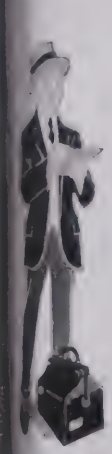


Inspiring Business Outlook Forecasted at Second Annual AOCo Sales Conference

THE second annual Sales Conference of the AOCo has passed, and it is with a feeling of the greatest pride and satisfaction that we now look back upon it; for it was one splendid success from start to finish, a week full of enthusiasm, of enjoyment, and of hard, willing work. Everybody labored loyally to carry the carefully laid plans through to successful conclusion. It just had to be a success.

We wish our many friends all over the country who now know us merely by a tiny AOCo monogram stamped on eyeglasses or spectacles might have been together with us in the big convention room and listened to the inspiring talks and words of cheerful forecasting that formed the keynote of the whole convention. It would have united us all together in stronger bonds than ever, and we would have worked together this coming year with a sense of sympathy that would have gone far toward the uplifting and further advancement of the optical business.

A goodly number of our "outside" men came to us from all parts of the country. You probably know some of them yourself: Payne, from our office across the Continent in San Francisco; Kriessl of Chicago; Bohling of New York; and Moseley from far-away England. They were given a royal reception, for some had not had the opportunity to get back to the home office for a long time, and their many friends were glad to see them.



The convention was formally opened at 8.30 Monday morning, August 3rd. Channing M. Wells, President, made a splendid welcoming speech, putting into well-chosen words the pleasure that we of the home office felt in being able to have the branch office salesmen with us. He was followed by Albert B. Wells, Treasurer, who gave a vigorous talk on the business outlook which lies ahead of us, in so far as could be determined during the unsettled conditions in Europe. J. C. Wells, Vice-President and Secretary, then gave us a fine logical exposition of the manufacturing outlook for the coming year.

It is impossible for us to tell of the entire program: how the branch office managers came forward with encouraging reports of conditions in their respective territories, telling with what enthusiasm the Fits-U Luxe eyeglass has been received and the phenomenal success it has won in the short time since it was introduced; how the foremen told of the manufacturing shortcuts that are turning out better goods; how the advertising plans were unfolded by our advertising manager, O. B. Carson, and an explanation made as to how the new plans would coöperate with every dealer who sold AOCo goods, helping him to increase sales. We can merely say that the program was an inspiration from start to finish, and everyone who had the privilege of being present as it progressed benefited richly by it. We leave the conference with renewed enthusiasm, with heightened belief in the superiority of AOCo goods, and a determination to make this coming year the best and most uplifting to everyone who comes in contact with us and the American Optical Company.



Our Three Branch Managers: Payne, Kreissl, Bohling



A PART OF THE AOCo "FAMILY"

The late Joe Jefferson once made a curtain speech in which he said: "When I see so many friendly faces in the audience I wish I could shake hands with each one." He was later asked how to shake hands with a face. However it may be done, here are a good many faces we hope you will be able to "shake hands" with some day.

Top Row. O. B. Carson, advertising dept., F. H. Pike, advertising dept., M. F. Judd, advertising dept., R. Murray, advertising dept., C. G. Hilton, foreign dept.

Second Row. J. W. Payne, San Francisco office, F. N. Kreissl, Chicago office, J. P. Petherick, AOCo Ltd., London, J. H. Bohling, New York office, W. H. Hurlburt, sales dept.

Third Row. A. Moseley, AOCo Ltd., London, C. A. Partenheimer, Chicago office, R. Schadla, AOCo Ltd., London, L. W. Bugbee, sales dept., F. Kropff, New York office.

Last Row. D. S. Woodward, New York office, H. C. Schumaker, San Francisco office, F. W. Starratt, San Francisco office, A. C. Witt, Chicago office, R. S. Turner, Chicago office.



A PART OF THE AOCo "FAMILY"

Top Row. A. C. Smalley, sales dept., H. J. Brackett, sales dept., J. E. Eaton, sales dept., F. G. Blanchard, sales dept., C. F. Hill, sales dept.

Second Row. D. H. Clarke, sales dept., P. H. Herbert, sales dept., R. L. Gordon, optical machinery dept., B. H. Chamberlain, sales dept., F. M. Shields, sales dept.

Third Row. J. E. Heffner, unfilled order dept., H. C. Munroe, claims dept., W. W. Crawford, accounting dept., C. F. Williams, billing dept., S. W. Cady, order dept.

Last Row. E. S. Boyden, order dept., H. Laflin, order dept., H. Estabrook, sales dept., R. B. Freeman, order dept., P. J. Dempsey, traffic dept.

Decorations for the AOCo Administration Building

We didn't put a "welcome" sign on the door mat, but we put one over the door, where it was even more prominent, and where no one (so far as we know), could walk over it.

And we decorated the front of the building until it looked like the 4th of July; all this merely to give a little outside evidence that things out-of-the-ordinary were taking place, and that we were glad to have them happening, too. Convention hall, where our meetings were held, was also given a new dress of flags and bunting. Numerous exhibits were also prepared by those who gave addresses, in order to illustrate their talks to better advantage.

"I sell nothing but your goods and I am not sorry I do."

A. B. Herschman, D.O.S.
Jersey City, N. J.

Hands Across The Sea

No, this isn't a photo of Barnum's "tallest man on earth." It's merely A. C. Smalley shaking hands with Moseley of the AOCo Ltd., London. They were taking a constitutional on the roof of our office building, after dinner, when the photographer slipped up and caught them.



A Conference Without Souvenirs? Never!

It wouldn't have been an honest-to-goodness Conference without souvenirs, you know. In fact it would have been almost as bad as a circus without peanuts or elephants. So we had some. Watch chains, with a button bearing the AOCo monogram in gold on a rich blue ground. Everyone wore a chain and they proved to be a great hit. What do you think of the idea? Pretty good, isn't it?

Address by Mr. E. E. Rice



Elwood E. R...

One of the most pleasant little spots of our Conference was the talk given us by Mr. Elwood E. Rice, founder and president of the Rice Leaders of the World Association. It is safe to say that after listening to Mr. Rice's inspiring talk, there was not one present who did not have a bigger and br... er faith in the Association and its ai... than ever before. It is a splendid move... ment, this calling attention to ... principles of Honor, Quality, Stren... and Service on which the business ... members of the Association ... founded. We want every dealer wh... sells AOCo goods to take advanta... of the opportunities offered by th... Association, through the fact that th... AOCo is a member by invitation. Th... dealer who connects his own reputatio... to the sterling worth of the Associatio... emblem and the principles for which ... stands, will have a business-buildi... force worth many times what it cost... to secure.

"I might state that I received my first ... ment of Fits-U Luxe Mountings and think it ... a dandy; also, the manner in which they ... packed is fine."

David N. Berris, Tiffin, O...

Some Selling Force, This!

Every man on the broad grin. They've ... had an extra inning dinner served by the AO... French chef, so they have a right to b... happy. Papa Smalley has a chick or two from each of our o... in the bunch. How many do you know?



Advertising That Brings Success

The result of an investigation showing what kinds of Advertising are being used to the best advantage in the Optical Profession

ALL businesses are peculiar, some more so than others. Ask any man what business is the most peculiar of all and he will probably say, "The one I'm in." Of them all, however, the Optical Profession has perhaps as much right as any to claim the doubtful honor of being "most peculiar."

With the purpose in view of finding out at first hand exactly what certain successful dealers were doing to solve this question of advertising one of the most peculiar businesses in the world, the AOCo recently sent letters to a large number of optometrists and opticians all over the country, asking what kind of advertising they were using, why they had chosen those particular kinds, and what results they were getting. The replies, while largely indeterminate, were nevertheless sufficiently clear to point the way toward those certain kinds of publicity which are best being used to the best advantage in the Optical Profession. As the names of those to whom letters were sent were selected quite at random from a mailing list covering the entire country (the only criterion of fitness for receiving a letter being the amount of advertising which had been done), the results may be taken as fairly typical for the entire profession.

Incomplete Investigation

ONE fact which was particularly noticeable in a large percentage of the replies that were received was, that the optometrists and opticians were often quite unable to give definite reasons for using one form of advertising in preference to another. As one man expressed it, he "Used all these mediums to get business because they seemed good and were more or less strongly boosted by the agents who were selling each particular line"—a tribute to the earnestness and ability of advertising solicitors, but hardly one to the optometrist himself. Spending money without making the most careful investigation of whether or not you are spending it in the best way is a rather foolish proceeding.

A Business of a Dual Nature

THIS fact can perhaps be partially explained, although hardly excused. The kind of work which an optometrist or optician is forced to do partakes of a dual nature, having both a professional and a business side, (if it is possible to separate the two). Too many are apt to cultivate the "optometrist" side of their business; that is, their personal service work, such as the examination of the eye, to the neglect of their business side, consisting of actually selling eyeglasses, spectacles or lenses. This is a mistake. While the work of the optometrist has a distinctly professional flavor, those who are most successful in this work are the men who are studying their profession as a business of buying and selling, that requires a decent knowledge of business methods and administrations. In this connection we recommend that if you have not had long experience in advertising, you read some of the many excellent new books which are being published on this subject. Thus some knowledge of the underlying principles which are largely responsible for the success or failure of advertising can be learned, and your own publicity work will profit accordingly.

Personal Letters Most Effective

THE dual nature of the work which an optometrist or optician does also largely accounts for the fact that in a majority of the replies which the AOCo received, it was agreed that *personal recommendations, personal letters, and circulars* were the most effective forms of publicity. Few would ever think of selecting a doctor because he used an attractive newspaper advertisement. A doctor's business comes to him almost wholly through personal recommendation of his satisfied patients. There is

Follow the Crowd





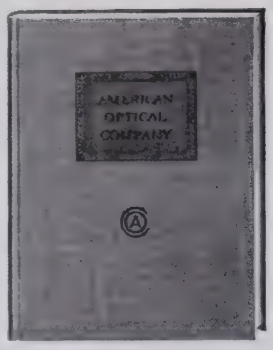
only one way in which you can gain the benefits of personal recommendation, and that is to give satisfactory service. No one can give you rules for this.

Next to personal recommendation, the personal letter is the most intimate form of advertising. It is not surprising, therefore, that they should be most effective for the optometrist and optician whose work is so largely of a professional nature.

List of Customers a Necessity

BECAUSE of the importance of direct-by-mail advertising, it is extremely necessary for an optometrist or optician to give particular attention to the building up of a list of names of those persons whom he knows are interested in optical affairs. A filing list should be started with a separate card for each name. Every person who comes to your office or store should be asked to give you his or her name whenever it is at all possible. Not long ago the writer was standing in an optometrist's store when a lady came in to purchase films for her camera, (which were a part of the stock carried by this particular store). The proprietor, noting that she wore glasses, engaged her skilfully in conversation, leading to the point where she was very willing to give her name and address. After she had left, the information was carefully noted on one of the proprietor's mailing list cards. If such a proceeding is persistently and tactfully followed, a mailing list may be made to expand astonishingly fast. Directories, Blue books, voting lists, etc., may also be used to help your mailing list develop growing pains. But it is well to remember, when selecting names in this fashion, that every butcher, baker, and candlestickmaker in your town has equal right to such lists, whereas that which results through personal contact with yourself or your store, is distinctly your own property. Its value is far above any other that you can make or buy.

Have you got it?



THE AOCo GENERAL CATALOGUE

If not, write for your copy at once

A Follow-up System

ONE excellent way of using your mailing list is to run it in connection with a "follow-up" system. An optometrist in a large Middle West city arranges his cards in a dated daily file, so that his attention is automatically called to each card two weeks after it is first filed. He then sends out a regular form letter to the customer, inquiring whether the glasses he fitted are proving satisfactory, whether they need any slight adjustment, or whether he or she needs further attention. Even though this letter may not receive a direct reply, the one who receives it feels flattered to think that the optometrist has taken such interest, and it is deeply appreciated. Every two months, the optometrist sends out some appropriate circular letter to his entire mailing list. If it is Fall and schools are about to begin, he may send a letter calling attention to the necessity for proper attention being given to school-children's eyes; if just before Christmas, he perhaps calls attention to certain of his goods as being appropriate presents, such for example as Aluminum Cases, Amoptiscopes, etc. In this way he has succeeded in building up a splendid business and is now very widely known for the quality of his work and the excellence of his service.

Optometrists or opticians in small cities or towns will usually find personal advertising matter more effective than will their fellow workers in the larger places. One possible reason for this was baldly but succinctly stated by an optometrist in Oregon who wrote that "The country people will read anything you send them."

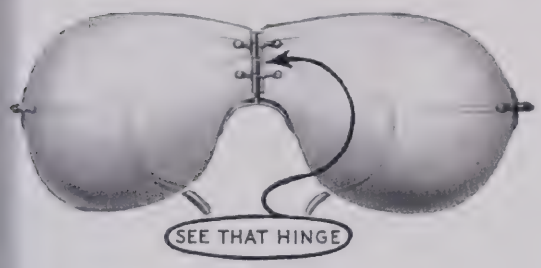
Newspaper Advertising

NEWSPAPER advertising is perhaps the best general form of advertising and surely one of the most effective. Its greatest usefulness is for

(Continued on Page



Push AUTOGLAS Sales This Fall



(PATENTED

A universally popular motoring and shooting spectacle known to everybody. Unobstructed vision, perfect fitting, comfortable and efficient.

The AUTOGLAS is supplied regularly with amber lenses of periscopic shape, absolutely without focus. If desired it may be procured also with prescription lenses having the individual wearer's correction. While amber is usually desired and is supplied unless otherwise specified, white lenses will be supplied at the same prices.

The AUTOGLAS is made with center piece and temples of gold-filled stock.

Made with Plano Meniscus lenses, in four shapes, two large and two medium, and a set of four for trial purposes is recommended.

AUTOGLAS Complete in Case, retail price per pair	$5.00
Repair One Lens, retail price	2.20
When correction Cylinder not over 2.00 D and total focus not over 4.00 D complete in case, retail price	9.00
Repair One Lens	4.20
When correction exceeds 2.00 D in Cylinder or 4.00 D total focus	13.00
Repair One Lens	6.20
Trial Sets in case comprising four glasses, showing each of the different shapes	20.00

EXTRAS

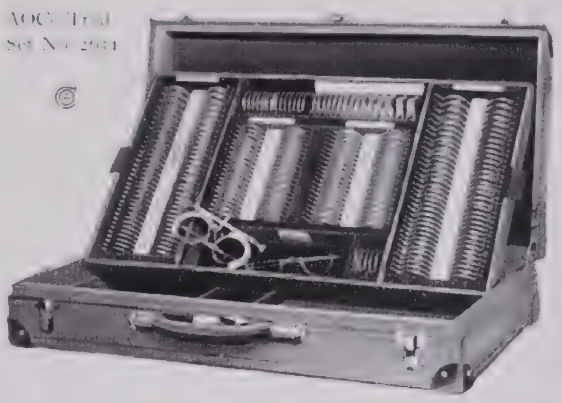
In addition to the above prices, the following "Extras" will be charged:

For Plano Meniscus Glasses, dark amber, Fieuzal and Smoke, $0.50 per pair extra
For Prescription AUTOGLAS, dark amber, $2.25 per pair extra
For Prescription AUTOGLAS, Fieuzal or Smoke, $4.50 per pair extra
For Plano Meniscus and Prescription Glasses other than regular sizes $1.00 per pair extra

"I am using the Fits-U finger mounting only after trying several others. I find that your mounting is the best, and am recommending to advise it to all my patients."

David A. Ricardo, O. D., Boston, Mass.

AOCo TRIAL SETS



When a Company has made trial sets for 25 years and has succeeded in bringing them to such a point of excellence as to make them the world's standard, it is pretty good proof of their reliability and quality.

Illustrated above is one of the traveling style sets that has helped to build our reputation.

It is No. 2631, with contents "D": 35 pairs sphericals, 21 pairs cylinders, $7\frac{1}{2}$ pairs prisms, 18 disks and colored glasses, one 3 cell and one single cell trial frame.

The case is covered with fine quality black or tan leather as desired. Lined with velvet. Space underneath tray where stock may be kept.

This style case may be had with a number of different contents

We have just issued a new trial set catalogue that pictures and describes our complete line. It is something that every oculist and optometrist should have. If you have not received a copy yet, write at once, and we will send you one.



Our Fall Advertising Campaign and Yours—

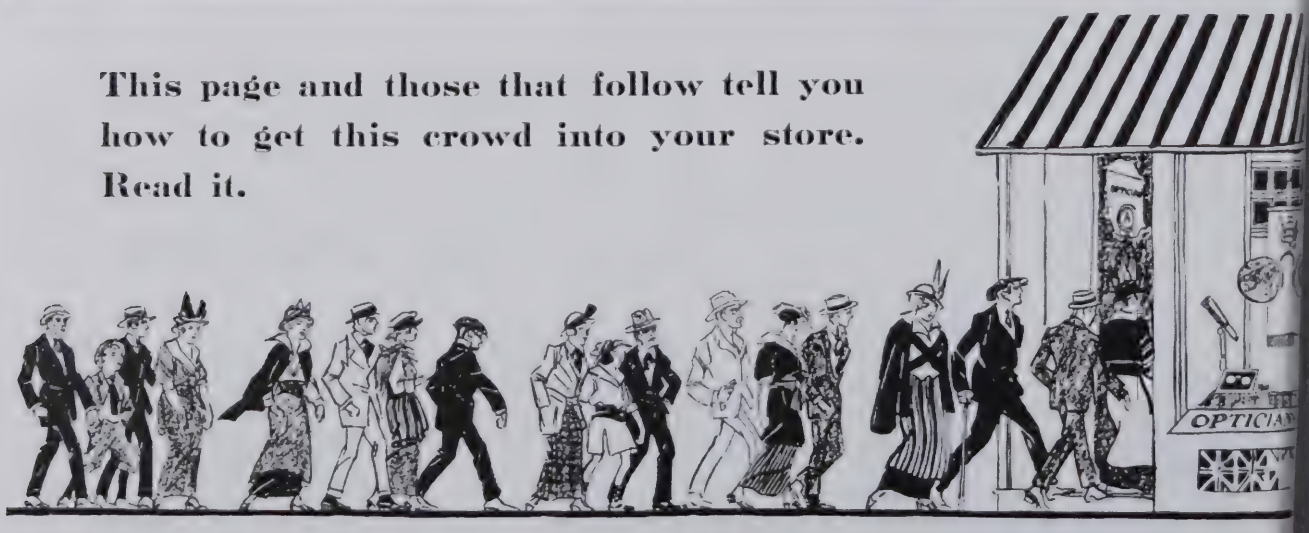
We show on Pages 12 and 13 the first advertisement of our Fall campaign, together with advertising helps for *you*, such as window cards, moving picture slides, newspaper ads, blotters, etc.

All of these advertising helps make use of the same illustrated border as is used in our national magazine advertising. This is for the purpose of helping you to cash in on our national campaign to the fullest possible extent.

Our advertising, beginning with the November issues, will run month after month in the leading national magazines, and will reach 25,000,000 readers. This means that in your own town our advertising will be brought to the attention of at least one out of four of the total population. The result is sure to be a largely increased demand for American Optical Company goods. The best way to concentrate the local demand on *your* store is to tie up *your* own advertising, window display and circularizing with our national campaign.

Team work of this kind is absolutely necessary if we are both to get the best results, and we earnestly urge you to send your orders for November advertising helps at the earliest possible date. It is understood, of course, that we make no charge for any of this material and we hope

This page and those that follow tell you how to get this crowd into your store. Read it.



therefore, that you will request only such quantities as you are sure you can use to advantage. This will ensure more prompt delivery.

On the following pages we describe in more detail the various advertising helps offered and the way to use them.

The Newspaper Advertisement

The newspaper advertisement shown on page 13 will take only four and one-half inches single column in your newspaper but it will dominate the page on which it appears. Your local newspaper's rate for this small space is very low. Persistence is what counts in advertising and we urge you to run this advertisement in every issue of your newspaper from October 15th to November 15th. Everyone who has seen our November magazine advertising will instantly associate it with yours and will recognize your store as the place to buy American Optical Company goods.

Similar newspaper advertisements, corresponding in illustration and design to our magazine copy, will be available as announced in Amoptico during our national campaign.

The electrotypes of this November newspaper advertisement include only the illustrated border. The copy is to be set by your local newspaper, which will make no charge for this service. This is done so as to permit changes of copy during the month. We would suggest a change of copy at least once a week, beginning the first week with the copy shown in the illustration on page 13, and subsequently shifting to any of the following three additional pieces of copy:

Your Eyes Earn Your Living

How much could you earn in your present position, how long could you even hold it, if you were blind? Defective eyesight is simply partial blindness. It's a poor economy to put off wearing Fits-U eyeglasses when you need them. It affects your earning power.

John Smith & Co. 217 Main St.

Eye Comfort

Have your glasses accurately fitted. The AOCo lenses and eyeglasses which we sell are the best obtainable, and we know how to make them fit your eyes right. Let us show you what eye comfort means.

John Smith & Co. 217 Main St.

Your Children's Eyes

You cannot be too careful of your children's eyes, especially during their years at school. Careful investigation has shown that most backward scholars have some defect of vision. Let us examine your children's eyes.

John Smith & Co.
217 Main St.

THE FITS-U EYEGLASS
will prove to you that glasses need not be unbecoming

THIS IS THE FITS-U EYEGLASS
Comfortable Inconspicuous and Easily Adjusted

THE FITS-U EYEGLASS
gives all the security of spectacles with an infinitely more becoming effect

The three changes of copy supplied with the window card

Additional changes of copy accompany the cut, thus giving you a wide range of choice.

The Window Card

The window card shown on page 12 effectively displays the same attractive design used for all our advertising in the November magazines.

As you have doubtless already noted, the reading matter of this November magazine advertising features the nationally known Fits-U eyeglass. A good Fits-U display in your window reinforced by these cards will immediately locate your store in the minds of passersby as the place where this eyeglass, advertised in all the leading magazines, may be purchased.

We have also prepared three pasters containing additional reading matter, which may be used to vary the appeal of the window cards. The new reading matter is simply pasted over the old, giving you the equivalent of several window cards in one. The reading matter on the extra three pasters is as shown above on this page.

Movie Slides

The lantern slide for use in moving picture theatres, as shown on page 12, affords one of the best possible means of focussing the local interest aroused by our magazine advertising on your store. Up-to-date advertisers everywhere realize the great value of moving picture advertising for

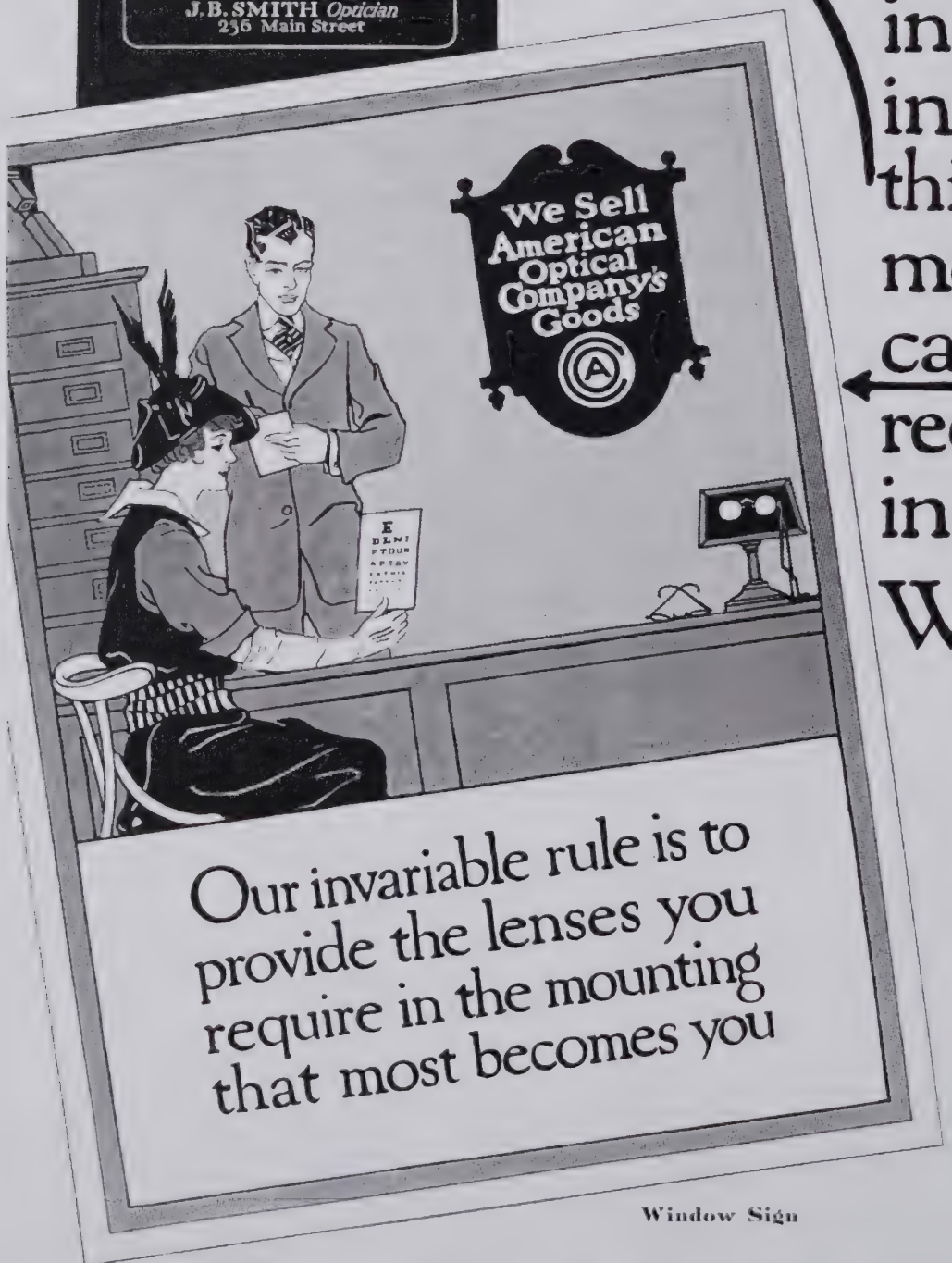
(Continued on page 14

OUR NEW ADVE

and how you ca



If those w
wear glass
in the maga
in your loca
this slide at
movie show
card in you
received this
in the mai
WOULD
THEIR



Window Sign

Send for thi
and blotter
any of this
quests in amp
printing yo
Our Novem
on this page,
the best pos
local campaig
write to us a

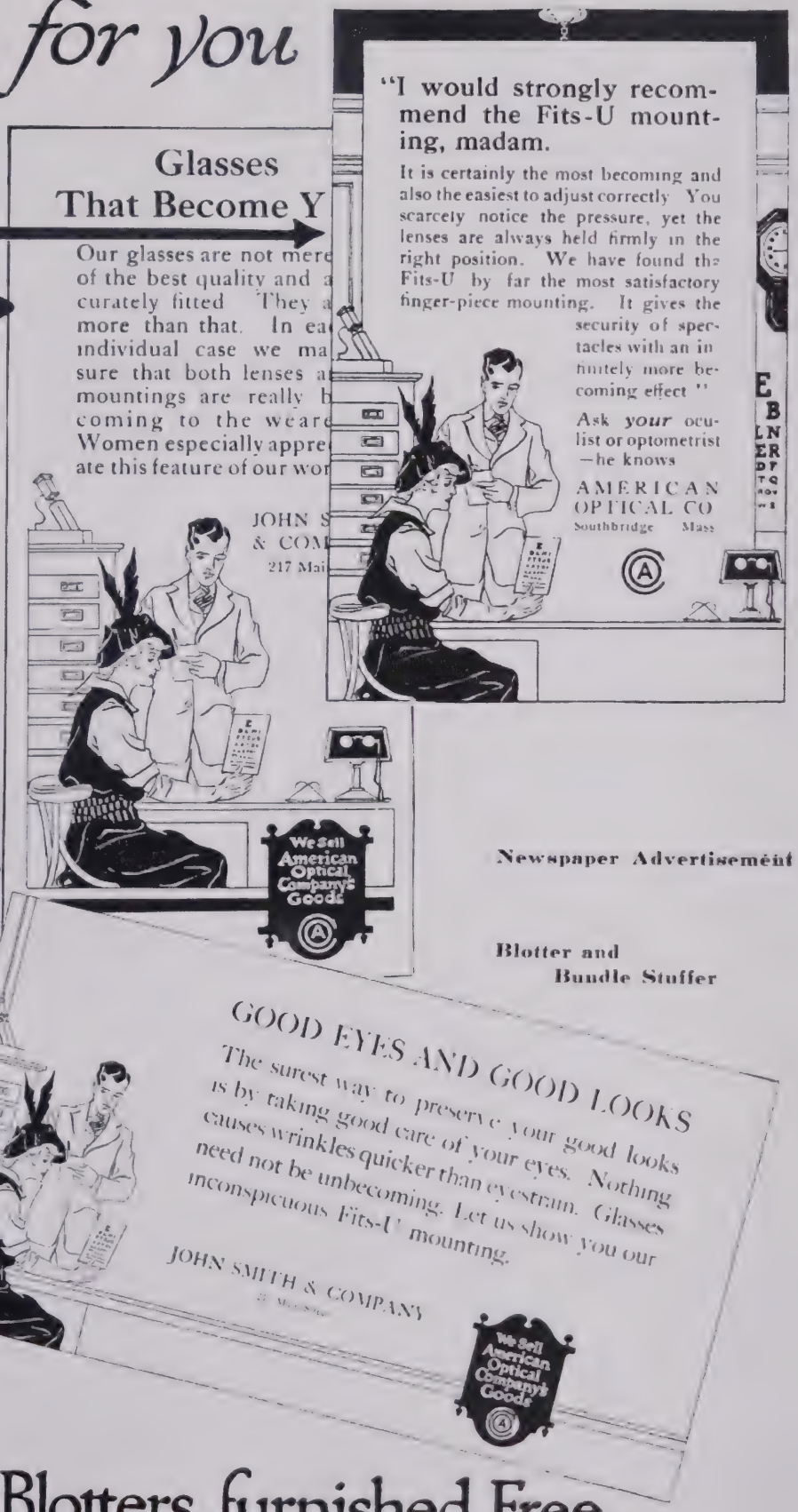
Newspaper Ads, Lantern Slides, P

SING CAMPAIGN

ke it work for you

or should
v this ad
nd this ad
paper-and
ighboring
his display
dow and
r or folder

OU GET
ADE ?



Newspaper Advertisement

Blotter and Bundle Stuffer

pe, window card
ke no charge for
have your re-
inting and im-

ising, as shown
er both. To get
to start your
Sit down and

Circulars and Blotters, furnished Free

(*Continued from page 11*)

staple articles such as optical goods. Competent authorities have estimated that at least 16,000,000 people go to the movies every day in this country. Your local moving picture theatre can give your advertising a highly concentrated circulation with the least possible waste among the very people who are or ought to be your customers.

The lantern slide we offer here makes use of the same design as our November magazine advertising, and during that month in particular should prove a most effective means of bringing trade to your store.

The strain of intently watching flickering films is sure to bring out any latent defects of vision, and there could be no better time than this for presenting your argument to those who really need glasses. For the same reason it will be well to stipulate that your slide be thrown on the screen toward the end of the performance.

Blotters With the Same Design

The design shown on page 9, corresponding to our November magazine advertising, is available also on blotters. We will imprint these in reasonable quantities with the name and address of any dealer in American Optical Company goods.

This imprinting takes time and it is particularly important that your request for this material be sent to us at the earliest possible date.

Every enterprising dealer in optical goods realizes the value and importance of accurate and up-to-date lists of present and prospective customers. A tactful effort should always be made to secure the name and address of every person who makes a purchase in your store. Additional names may be obtained from telephone directories and similar sources. These lists should be circularized from time to time with announcements of any special sales and with advertising matter such as is offered here.

If you extend credit in your business it is worth remembering that the two-cent stamp which carries your monthly statements might just as well be working up future trade for you at the same time.

Give it a Good Try in November

We have given a great deal of time and attention to the various advertising helps described in this issue of Amoptico, and we have spent a great deal of money on them. We have not done this from pure philanthropy. We know that the quickest possible way to increase our own business is to increase *yours*.

We hope that you will meet us in the same spirit, help us to get together for the team work that wins out in business as in everything else.

No one ever made a success in advertising by going into it half-heartedly. We therefore urge you to undertake a complete local campaign, using all of the advertising helps offered here. Give it a good try-out in November at any rate. We feel sure that if you do the increase in your business will warrant its continuance.

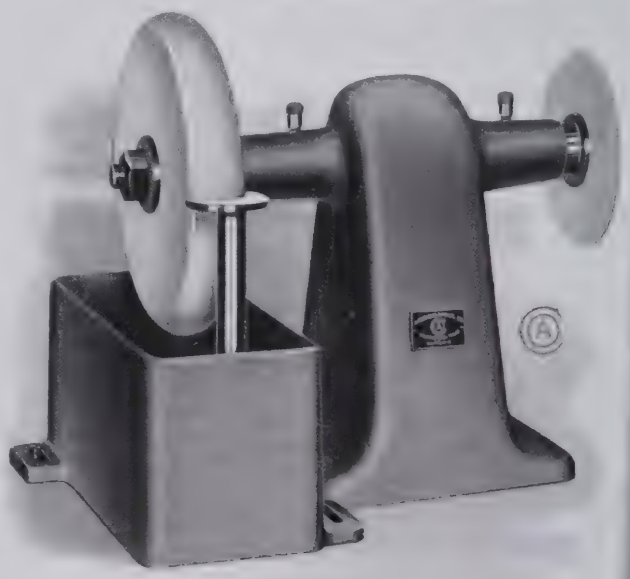
If we can help you with any particular advertising or sales problem do not hesitate to write us about it. That is what we are here for. And last but by no means least, let us repeat once more:

Get your requests for advertising helps in *early*. The safest way is to sit right down *now*, and send us your letter by return mail.

Grind Your Perfection Bifocals

on a machine of the latest and most improved design. The AOCo M185 grinder shown here is the neatest, handsomest and most efficient on the market. Its price is $25.00.

Your jobber can supply you with this machine or with any other AOCo machines. Write for an AOCo general catalogue, describing them.



"The AOCo catalogue is a jewel to any optometrist or opticia as it gives practical reference to all articles manufactured by th AOCo. I find it very convenient and want to convey my appre ciation. Have made good use of your folders and have no doub but what they bring results. Have used your mountings, frame and Fits-U's, and have found them satisfactory in ever way. It has been proven to me by actual experience that r rimless mountings and frames are very enduring. Some ti ago a patient came in and claimed that the frame he had be wearing had given him great satisfaction, and as he had b wearing it for about 7 years he wanted to have me replace i The frame was in pretty fair shape, but as he was going to Alas he wanted to fortify himself against breakage. On looking insi of the bridge I found it was an AOCo 1/10 12K frame. Havi the same handy, I showed him I could duplicate it, which I d with pleasure. I just wanted to mention this incident, as you doubt will be pleased to hear it. Certainly it convinces that AO goods are all that they are represented to be."

Chas. Schwartz, Seattle, Wa

Amoptico

Reg. in U. S. Pat. Off.

Vol. III September, 1914 No. 6

Published Monthly by

merican Optical Company

1833-1914

anning M. Wells, President — Albert B. Wells, Treasurer

J. Cheney Wells, Vice-President and Secretary

General Offices and Works

uthbridge, Massachusetts, U. S. A.

New York . . . 15 Maiden Lane
Chicago . 122 S. Michigan Boulevard
San Francisco . . 140 Geary Street
European Agency,
American Optical Company, Limited
39 Hatton Garden, London, E C

Cable Address: Amoptico, Boston
Western Union Code used

Manufacturers

pectacle and Eyeglass Frames, Mountings and Material, Eyeglass Chains, Automatic Eyeglass Holders, Trial Sets, Trial Frames and Accessories, Automobile Goggles, Lenses, Spectacle, Eyeglass and Goggle Cases, Optical Machinery, Tools and Supplies, Etc.

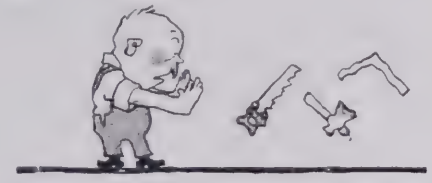
Copyright, 1914, by American Optical Co. Permission to reprint articles granted on request



WE know a firm which prides itself on the quality of the eyeglasses it sells and the high-grade accurate fitting work it does. It handles the best eyeglasses on the market. If you were to accuse it of doing unsatisfactory work because by such methods it could save one cent on every sale, the members of the firm would promptly become righteously angry and probably start to tell you—a variety of things.

Yet that firm, in order to save approximately one cent on each sale of eyeglasses, makes it a practice to use an inferior quality of case. They jeopardize their reputation as dealers in the best optical goods, by arguing, apparently, that the *eyeglasses* are what they sell and what are important, whereas the case is not worth any attention; forgetting that a customer must carry the case as well as the eyeglasses, and a shabby case will not make him feel any more kindly toward the firm that gave it to him.

Cheap cases are made to hold cheap eyeglasses. It seems to us rather "penny wise, pound foolish" to use them on the better grade goods. At most it only saves one or two cents, and it means that long chances are taken of dissatisfying the customer. On page two of this issue we show a number of first quality polished aluminum cases that will give satisfaction wherever used. Look them over carefully. Perhaps you can use them to good advantage.



A GOOD mechanic never works without the best of tools, and all the tools he needs. We see no reason why those who conduct a successful optical business should not work with the best of tools, too. And one of the best tools for carving out better business is an AOCo general catalogue. We call it "catalogue" because Webster doesn't seem to give us any other name more suitable. But it is more than a catalogue, or a list of optical goods. As P. T. Barnum would probably say, it is a "superb symposium" of facts relating to all the various lines of optical goods with which optometrists and opticians deal. We could fill this whole issue with nothing but testimonials we have received from delighted dealers who have requested a catalogue, and who now find it indispensable in their work. Then we could begin and fill up other issues, too. For they come in with almost every mail. But that wouldn't help you very much more than to show you what others think of it.

An AOCo general catalogue costs you merely the effort necessary to write us saying that you want one. We will do the rest. If you haven't one now, better write today.

AN old story runs that once a rich man prepared a banquet. A most wonderful feast it was, with every artifice known to the culinary and decorative arts brought into play; for the surfeited minds and palates of the wealthy guests were to have a treat beyond all imagining.

The table was set, the master ready—when to his horror he remembered that in the excitement of preparation he had forgotten to invite the guests!

What a hurrying and confusion then began! Servants with belated invitations were sent scurrying to every part of the city. But it was too late. One man had just made arrangements to transact a land deal; another was to be married; and so the entire number gave excuses.

A foolish performance, wasn't it? But how about the optometrist who prepares a fine stock of optical goods and forgets to tell the public about it? How much better is his case than that of the foolish man who prepared a banquet without inviting the guests?

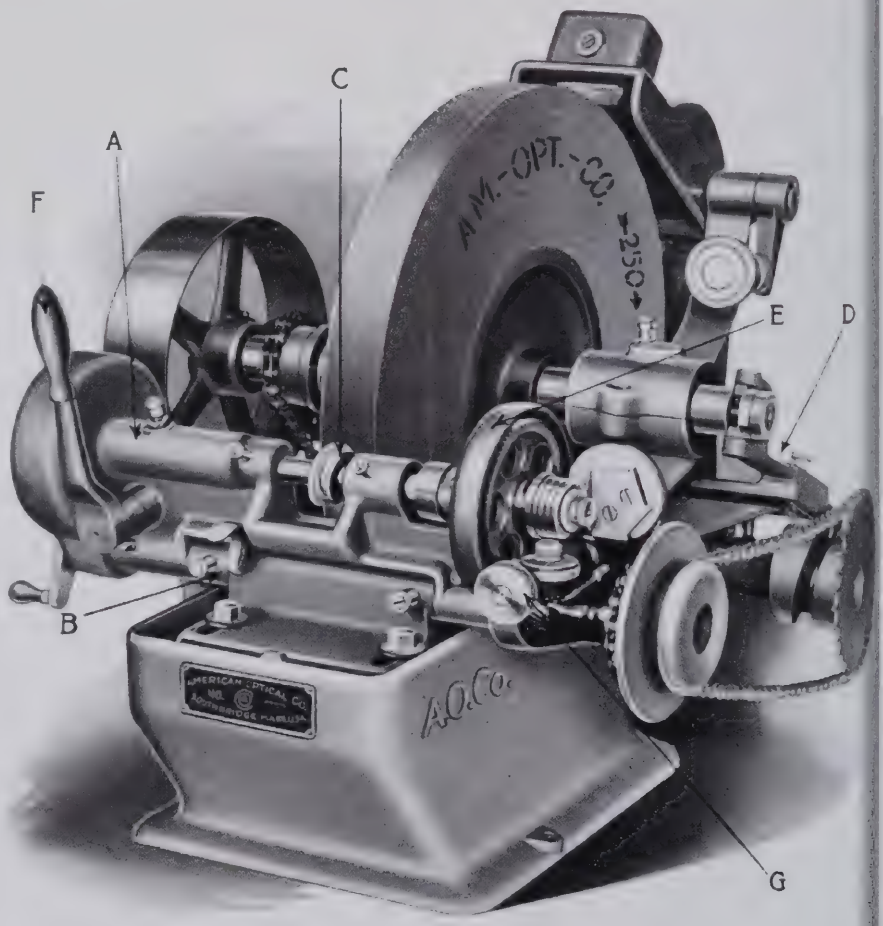
It is as essential to let the public know that you carry AOCo goods as it is to stock them. We spend thousands of dollars, monthly, in magazines with national circulations, to create a steadily growing demand for Fits-U Eyeglasses; and we hold at your free disposal newspaper electros, window signs, imprinted car cards, leaflets, lantern slides, blotters, etc., that will help to invite your "guests" to your store.

Specify AOCo goods to your jobber and be sure you get them. Then use the AOCo advertising service. Be the wise man with the best line of goods and the biggest number of customers.

"This has been the very best year of my eighteen years' business life, and I am very willing to credit AOCo goods with a large share of my success."

R. C. Augustine, Decatur, Ill.

The American Automatic Rimless Edging Machine No. M72



For those who have learned the value of accurate and up-to-date tools in their shops, the new American Edger is bound to meet with instant appreciation. It is not strange that it was left to the American Optical Company, with its unequalled facilities to perfect this type of machine, as from their long and varied experience in the manufacture and sale of lenses we have become fully acquainted with the requirements of a perfect Automatic Edging Machine.

In this new No. M72 Automatic Rimless Edger we have retained all those distinctive features that have proved their worth in the years past, with the addition of many new and novel features to meet the exacting demands made upon it by modern prescription shop orders.

Interchangeable Formers. All lens patterns, or formers, are now made interchangeable and are identical with those used on lens cutting machines. Five formers corresponding to standard lens shapes are affixed to end of spindle, and a change from one to another necessitates only the indexing of a specially constructed and hardened steel shoe, which is at all times in direct contact with the former corresponding to lens shape desired.

Lens Size Indicator. Any desired size of lens can be obtained by adjustment of knurled indicator (G), at the extreme front of the machine within easy reading distance of operator. An accurate reading of lens size is assured through a positive tension device on indicator worm and gear, eliminating the slightest back lash.

Adjustable Quick Acting Lens Chucks. Lenses are rotated on spindle (C) in a chuck the special design of which permits one or more lenses being held at a time, while still maintaining an even holding pressure, whether there be one or eight lenses in the chuck. This is truly a tremendous advantage, as it assures holding several lenses positively without a severe increase in pressure on the pads. A conveniently located lever, (F), one throw of which will instantly open the chuck, permits the easy insertion of lenses. At the extreme left of the machine is a well proportioned hand feed wheel for the rapid finishing of lenses.

Constant Feed Tension. The entire swinging head (A) is pivoted at (B). Tension of lenses against stone is controlled by an adjustable weight applied at right angles to swinging head. This is the ideal method of feeding as it permits a uniform pressure throughout the grinding of the entire periphery of the lens. This is *not* true of machines where lenses are fed by spring tension. A hand operated clutch which will start or stop the feed mechanism instantly, when necessary, is located at the right of the machine, within easy reach of the operator.

Oscillating Wheel. The stone on the American Rimless Edger is the oscillating member and has sufficient travel to cause an even wear on its face, as well as permitting re-surfacing, if necessary, the entire face of wheel, with a special diamond truing attachment that can be inserted between pads

place of lenses. Such an attachment will be loaned by the American Optical Company upon request, at a nominal charge to cover wear on the diamond, transportation, etc.

Automatic Hone. It is only necessary to re-surface the stone should it become badly scratched or gouged, as the American Automatic Rimless Edger is equipped with an automatic hone for keeping the wheel perfectly smooth and true, and maintains a smooth velvet finish at all times. The travel of the wheel can be governed by means of adjustment provided on oscillating arm (D) which is operated by cam.

Incased Gears. All gears are partially enclosed, excluding dirt and insuring the operator against personal injury.

Provision has also been made for replacing all bearings by specially designed bushings, and all shafts are specially ground with a view to extreme accuracy. In the American Automatic Rimless Edger the stone is entirely above the bench which need only be cut for one belt and drain pipe.

The rapidity and accuracy with which this M72 machine works is as remarkable as is its simplicity of construction. Its many automatic features make it extremely easy to run. We recommend it to you as being the most advanced type of edger on the market. Send your order, or write for further particulars, to your jobber. Price $135.

"Received your catalogue, which was so kindly sent and I wish to thank you very much for same. The beauty, style and size of your catalogue is beyond my expectations. It contains an education in itself, and we will find it of great value in becoming familiar with optical stock."

W. H. Rowe,
Prince Albert, Sask.

How the M72 Works in Practice

American Optical Co.,
Southbridge, Mass.

Gentlemen:

"We received the M72 edging machine shipped by our jobber. It is only fair for us to inform you that we have, in our shop, three other edgers and this last model of yours is the cleverest specimen of lens grinding machinery ever conceived. It is doing twice as much work as the other edgers and we are exceedingly pleased with it."

Yours truly,

El Paso, Texas. El Paso Optical Co.

SAFETY FIRST

Saniglas
TRADE MARK REGISTERED

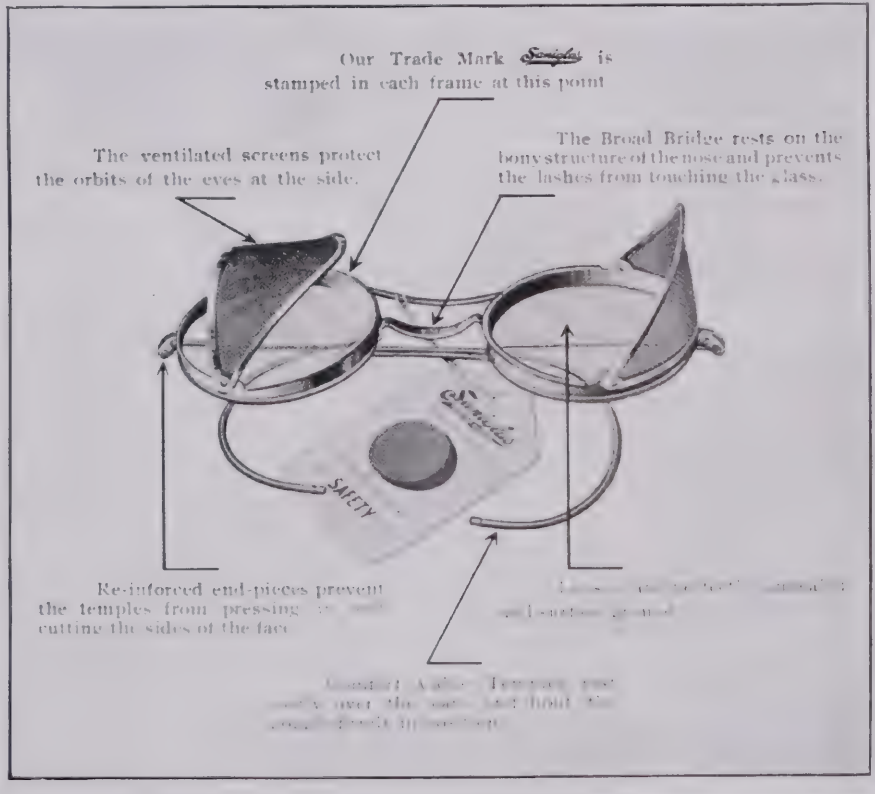
An Opportunity

Every year the eyesight of thousands of men is being impaired or totally destroyed by industrial accidents. In practically all cases the use of the Saniglas Eye Protector would prevent these terrible consequences.

Hundreds of firms, large and small, now provide their employees with Saniglas Eye Protectors, and many issue Bulletins stating that these eye protectors must be worn when workmen are engaged in certain hazardous occupations.

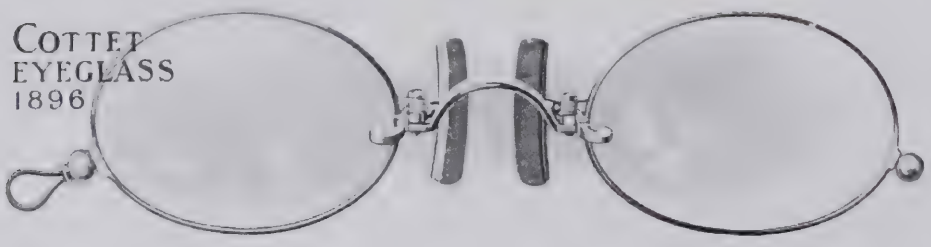
There are thousands who *would* supply them if they knew what the Saniglas would do—just as there are any number of individual workmen who would buy them if they knew of the sure eye protection they offer.

Ask your jobber to send you Saniglas Eye Protectors (made in an assortment of six sizes) and cultivate this wonderful new field for sales that now lies idle.



The Fits-U Luxe after Six Months

Six months ago we had the pleasure of announcing that we were ready to sell a new eyeglass with a construction such as had never been used before: upper-bearing pads working independently of lower fixed guards, by means of the AOCo Ovalex spring with which you are all familiar.



As business is apt to be a glorified game of "follow-the-leader," we were prepared to have our announcement received with a moderate amount of enthusiasm only. A large number of Fits-U users would naturally wish to sit back and await further developments before deciding to use the Fits-U Luxe.

That is what we had a right to expect. But we found that the idea was so obviously an improvement on everything which had gone before that orders came in through jobbers until our manufacturing departments were fairly swamped. We were almost caught napping.

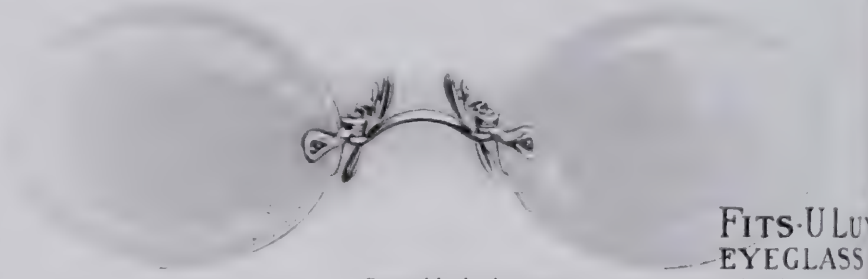
That was six months ago. Since then those who ordered immediately have had plenty of opportunity to prove to their own satisfaction every claim we made for the Fits-U Luxe. And they have done it. Reorders have been sent in, larger than the first. Letters affirming the value of the eyeglass have been written. Optometrists and Opticians seeing and hearing of the success which the pioneer orderers have had, are now making it a point to see that Fits-U Luxe is specified when their orders go to jobbers.

But, as we said, business is always a "follow-the-leader game." If you have been waiting for developments before trying the Fits-U Luxe, you may now act with perfect confidence. The Fits-U Luxe has made good. It has proved our early assertions that it is another long stride in the direction of eyeglass perfection.

You may order it with entire assurance that it will meet every requirement of use, beside giving greater comfort than has been possible with any other form of construction.

It is often commendable to sit back in this game of follow-the-leader and await happenings. But it is seldom the part of wisdom to wait until the game has almost gone by and then tag on to the tail of the procession.

Now that the Fits-U Luxe has actually proved itself, those of you who have been "sitting tight" should add it to your line without further hesitation. Your jobber has it and can sell it to you as follows:



Covered by basic patents

No. 03121 Fits-U Eyeglass, Patented (Ovalex
1/10 12K Gold-Filled Mountings $7.50 Per D
10K Gold Mountings 16.50 "

Clearing the Path for the Fits-U Luxe

About two-thirds of the eyeglass battle depends on the accuracy with which fitting is done. We have had a number of inquiries as to the proper way to fit the Fits-U Luxe.

Always remember that upper guards and lower bearing pads are independent of each other on the Fits-U Luxe. You should first adjust the lower pads to the patient's nose, bending the loop arms with pliers until the glasses rest comfortably and securely in position. This is the secret of Fits-U Luxe comfort. The upper guards, actuated by AOCo Ovalex springs, should then be fitted to prevent the glasses from tilting forward.

Correct fitting done in this way will give the Fits-U Luxe an opportunity to make good. Results will be gratifying both to the patient and yourself.

Advertising That Brings Success

(*Continued from page 8*)

who are located in larger cities. The use of the "business card," however, should be avoided. If you have nothing more to say for yourself than that your name is John Doe and that you are an optometrist, say it outside of the newspaper columns. It costs less.

There are two specific kinds of "copy" which may be used in newspaper work, the one featuring your skill and long experience as a competent eye specialist; the other featuring the kind of eyeglasses or spectacles you sell and the special advantages they possess. An optometrist in Massachusetts recently made experiments with both kinds of advertisements at the same time and under exactly similar conditions. He found that the advertisements which featured the goods rather than his personal qualifications for work were almost four times more effective than the others.

The thought of wearing glasses is always distasteful to the man or woman who has never been compelled to use them. For this reason, the copy which tends to allay sentiment about the discomfort, the annoyance and the unsightliness of glasses is in the long run most effective. Use of anatomical cuts which show sections of the eye, or diagrams of a similar nature, should be avoided as much as possible. To the optometrist who is thoroughly familiar with them, illustrations of this character are always interesting, but to the layman they are usually uninteresting and very often actually repulsive because of the association of thoughts they are apt to cause.

Window Displays Sell Goods

PRACTICALLY the unanimous opinion of all who answered the AOCo letter was that window displays were a most effective means for increasing sales. Creating effective displays of optical goods is a difficult matter, owing to the small size of the goods and their similarity. It may be said that it is best as a general rule to feature only one single line or style of goods at a time. A promiscuous selection of optical wares is usually unattractive. Those special lines which should be featured are of the utmost importance. No sane man will buy a pair of eyeglasses merely because he sees a pair in your window. In order to appreciate their good points, he must become thoroughly acquainted with them, and this he can only do by coming inside your store and talking over the subject with you. The many different points on which the excellence of an eyeglass depends can hardly be emphasized in a window. Such goods as motor-glasses, smoke glasses, etc., make excellent subjects for window displays.

In the case of some unusual eyeglass, however, this rule may be broken. A new construction, like the Fits-U Luxe for example, is sufficient cause for an educational window display of the goods with brief explanatory signs. These signs should not, however, attempt to explain all the features of the new construction. They should merely get the passerby *into* your store in order that you may explain them yourself at length.

Seasonable displays of optical goods are always in order, and are usually very much worth while.

Analysis of Problems Necessary

UPON personal advertising matter, newspapers, and store windows will probably fall the burden of the greater part of your publicity. Other forms, such for example as Moving Picture slides, outdoor signs, etc., are all helps in certain cases. But no general rule for these can be given.

The experience of many successful optometrists and opticians teaches that with proper restrictions, publicity may be applied in this most peculiar of businesses with real expectation of success. But the particular problems of your own individual location, class of customers, distribution of population, etc., must be worked out with the greatest of care. When this is done and you have decided on those kinds of advertising which seem to be most suitable, taking into account all these different circumstances, there will be the real success of a live, growing business within your grasp.



The Kryptok trademark attains its full value only when coupled with the AOCo trade-mark. Our reputation behind Kryptoks is your assurance of satisfaction. Specify AOCo Kryptoks of your jobber.



Behind the Palms at St. Louis

Right across the end of the big exhibition room of the Planters Hotel where the A. O. A. Convention was held, July 18-2 stood a beautiful white pavilion that bo the name "American Optical Compan Largest Manufacturers of Optical Goods the World"; and a banner announcing th the AOCo was by invitation a memb of the famous Rice Leaders of the Wor Association.

It was our exhibition of optical goo that was being displayed, the largest a finest at the Convention. The regist kept at our booth was very nearly as lar as the official register in which every Co vention visitor signed his "John Ha cock." So you may judge how popul our display was.

Green foliage, fresh and cool from ou of-doors, and souvenir fans helped to ma this booth an oasis in the fierce St. Lo heat.

We expect to be at the San Fran sc exposition next year. Why not meet u there, too? Our display will be w seeing.

AOCo UNI-BIFO LUXE

Reg. in U. S. Pat. Off.

"PATENTED"

Onepiece Ophthalmic Bifocal Lenses

"A Single lens with a double purpose"

EIGHTEEN years ago a man by the name of Cottet invented the fingerpiece eyeglass principle. It has taken all the time since to develop Fits-U Luxe Eyeglasses, the perfection of this first idea.

Many more years ago Franklin invented the first bifocal lens. It is only recently that we have achieved the fulfillment of his idea of a perfect bifocal. Truly, the world moves slowly.

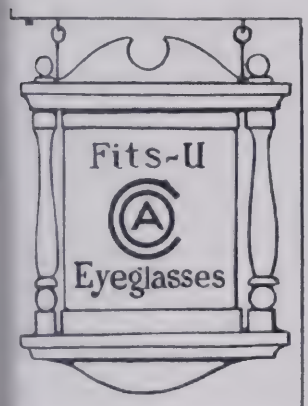
But it is not necessary to wait longer. You now have at your command the AOCo Uni-Bifo Luxe Onepiece Lens, with two foci invisibly ground on one single solid piece of glass.

Absolutely free from colors. *You may grind the lens as thin as you wish.*
The dividing line is practically invisible. *Two sizes of reading portions are available.*

AOCo Uni-Bifo Luxe Onepiece Ophthalmic Bifocal Lenses can be obtained of any jobber holding a finishing license. Try them.

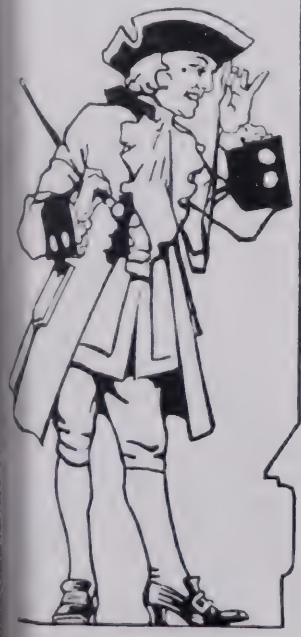
Plan Your Rice Leaders of the World Display Now

During the year's publicity campaign of the Rice Leaders of the World Association, the emblem, with which you are now all familiar, will be shown more than thirty-three million times in magazines alone. That means that every magazine reader in your town will be thoroughly familiar with it and the principles of Honor, Quality, Strength and Service for which it stands. They will realize that its use in connection with optical goods means that those goods are recognized as the best made, and can be fully trusted in every particular of value and service.



"I am having a good trade with your Fits-U eyeglass as ... your complete line of ... ds. I wish to acknowledge ... nice lot of splendid advertising matter ... ent me and ... advise you that I have found it very helpful to my optical department. There ... no doubt but what I have increased my optical business by using it."

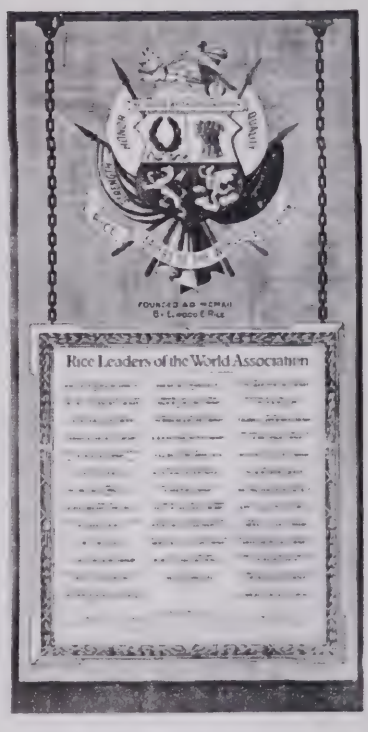
Meyer Opt. Co.,
Stockton, Cal.



What are you doing to apply this unique advertising and business building force to your business?

As a dealer handling AOCo goods you have the privilege of using the emblem, for the AOCo is a member by invitation of the Association.

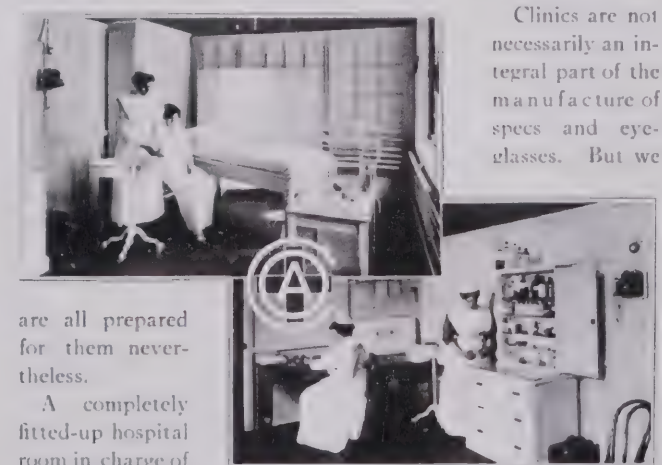
The best way we know of to secure the full value from this emblem is to write to the Rice Leaders of the World Association, 5th Avenue and 34th Street, New York City, and tell them that you wish to enter the $15,000 window dressing contest which is now being conducted. They will send you a beautifully colored banner, bearing the Association emblem. Using this banner, you can then prepare a window display of AOCo goods and try for one of the hundreds of prizes, ranging from $2,000 down, which are offered for the most attractive displays entered in the contest. You must allow the display to remain in your window at least one week, and should then send a photograph of it to the Association, from which its effectiveness may be judged.



The banner that will be sent in response to your request, 45 in. long by 20 in. wide

Don't delay. Write at once for a banner and full particulars of the contest. It means little work, little expense and a splendid opportunity to identify yourself with an Association which is nationally known for the sterling attributes of its every member.

Safety First the Slogan Here



Clinics are not necessarily an integral part of the manufacture of specs and eyeglasses. But we are all prepared for them nevertheless.

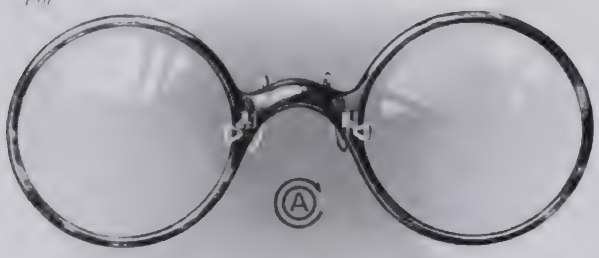
A completely fitted-up hospital room in charge of an experienced nurse is always ready to receive any employee of the company who is in need of medical aid.

The AOCo has adopted the suggestions of insurance companies and the recommendations of the State regarding safety devices throughout the factory, and the result is very gratifying. Very few accidents are reported and these are generally more or less trivial in character because we are willing and anxious to help along the splendid Safety First movement.



NEW GOODS *for* LIVE DEALERS





New Design Zyloware Fits-U's

In the sale of style goods, such as zyloware fingerpiece eyeglasses, the design is the most vital of all considerations. When a young man (or old for the matter of that) purchases an article of a peculiar style because it is "all the rage" his first thought is to get something just a little bit more "nifty" than anyone else has.

For this underlying reason, therefore, the new design zyloware Fits-U's shown here are particularly effective. They are neater than any other styles on the market.

Notice the illustration of the R3112 model. The spring and post screw are not set above the bridge as in all other styles. Rather they are set directly in the center of the zyloware itself. The "machinery" controlling the action of guards and fingerpieces is practically hidden. The bridge is strengthened at each end to preserve the rigidity of the frame under all reasonable conditions.

Owing to a peculiar bend in the fingerpieces they do not protrude into the lens areas. When in position the broad zyloware bridge and rims practically conceal the guards. The effect is that of an eyeglass made entirely of zyloware.

The second model shown, is our 1/10 12K No. 3112 Fits-U fitted with No. R811 heavy zyloware rims. The particular point to notice about this eyeglass is the straps. These are sunk in flush with the rims and each has two rivets, which prevent the rims from becoming loose and working out of alignment.

These models are made with 40 mm. eye, and can be supplied with any of the regular style guards. They have just the appeal of up-to-date style necessary to make them satisfactory sellers. You may get them of your jobber as follows:

CAT. NO.	DESCRIPTION	PER DOZEN
3112	1/10 12K, with R811 heavy zyloware eyes, dark shell color	$12.00
	With R841 eyes, light shell color	13.50
R3112	With 1/10 12K guards and arms	14.50



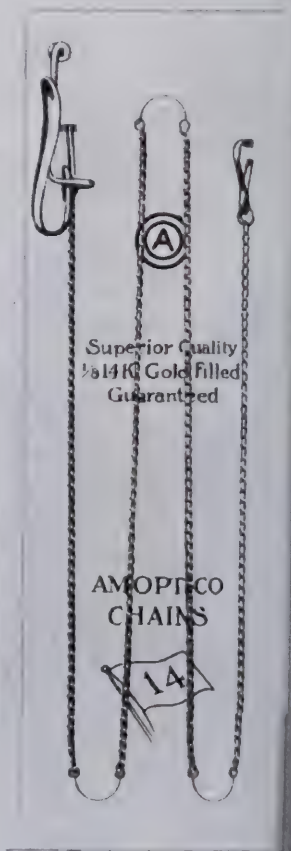
No. 3112 with Zyloware Rims

"Amoptico" Line of Gold-Filled Chains

Those of you who are familiar with the high grade quality of the AOCo line of Amoptico 14K gold-filled spectacles and eyeglasses will welcome the news that the AOCo Amoptico line is to be extended to include eyeglass chains. There is no reason why you cannot sell just as high grade a chain as any other article. It is largely a matter of salesmanship. No one likes to purchase a second rate chain after hearing the merits of a first quality chain explained. Inside of every one of us is a longing for the best. That is what will enable you to sell Amoptico chains, made in 1/8 14K only, the highest grade on the market.

Write to your jobber for the particular style of link, hairpin, hook and earloop you wish to sell and tell him you want the AOCo Amoptico line. Aside from the fact that these chains are very fine quality, you will find their finish and color exceptionally good. They are the best that can be produced.

We are illustrating one of the chains here in order that you may see not only one of the most popular styles, but the card to which it is attached. Similar cards are used for other Amoptico chains. Put the mark of "first quality" on the goods you sell. Your trade and profits will reflect it.



Kilglare, Two Motor Glasses in One

Every autoist knows that "all-done" feeling, as the blinding headlights of another car come springing out of the blackness to meet him. You can appreciate it only when you have bent over a steering wheel yourself and been dazzled by the glare. And your appreciation will lead you to realize the value of Kilglare motor glasses, that by a simple downward turn of the head enable you to eliminate the dangerous blinding acetylene rays. A third-lens segment of dark amber glass inserted in each eye does the trick. By merely lowering your head, this segment is brought before your eyes and the glare reduced to an amber glow. Your road still lies before you then; the danger is eliminated.

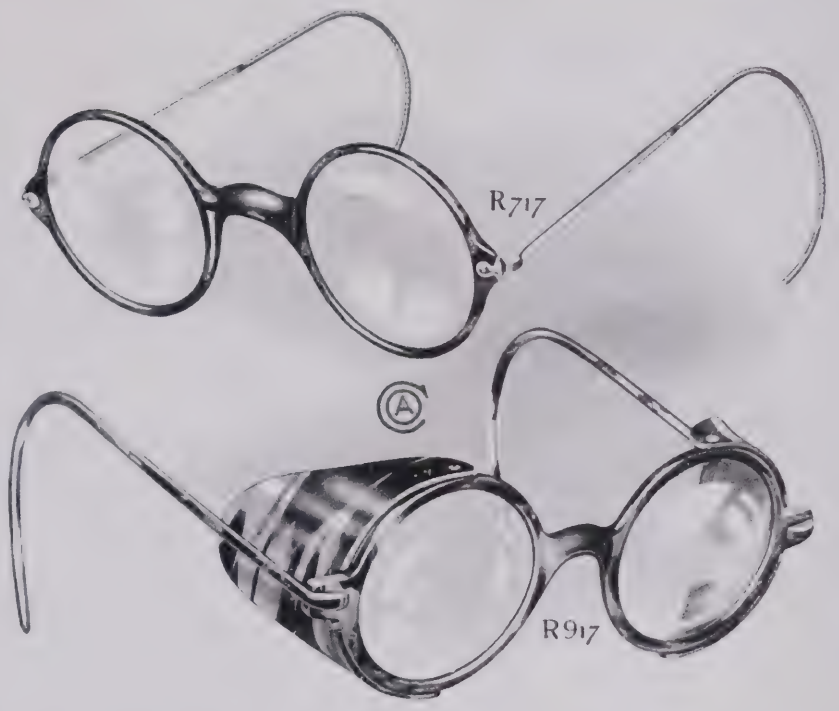
Kilglare motor glasses are made in two models: the No. 3348 B. E. Speedwell, and the well-known No. 3026 1-2. The ideas of comfort and efficiency on which they are constructed gives them the strongest kind of a selling appeal. Put them in your store, tell your auto-owning customers about them and their response will mean many sales. Specify Kilglare lenses when ordering.



No. 3348 B. E. Speedwell Kilglare

DESCRIPTION	PER DOZEN
No. 3348 B. E. Speedwell motor glass, with Kilglare lenses (upper third dark amber, lower two-thirds light amber) 47 mm. eye, complete with No. 377 Japtol case.	$14.00
No. 3648 Gold-Filled Speedwell motor glass same description as above	19.00
No. 3026 1-2 motor glass, white metal, round eye, with Kilglare lenses	16.00

Prepare for Zyloware Trade This Fall



Probably you are all quite familiar with zyloware goods by this time and have found, just as we have that they are here to stay. Their lightness and the comfort of wearing them has earned them a permanent place.

The AOCo did not "fall all over itself," so to speak, trying to be first in the field with zyloware goods. We preferred to travel a more leisurely gait, picking our way carefully, for we knew that the results obtained would warrant the extra expenditure of time.

This is our first announcement of the zyloware spectacle and motor glass pictured here. In every essential feature of design, construction, and finish they show the result of the careful experimenting and the long stage of preparatory work through which they have gone. We have "made haste slowly" to such good advantage that we can unhesitatingly say that these are the best goods of their kind now being made.

The zyloware spectacle No. R717 has the patented AOCo invisible endpieces. Temples are half flat half comfort cable, with smooth tips. By combining these gold-filled temples with zyloware fronts we obtain lightness and great adjustability, a very desirable combination. 1/10 12K gold-filled stock is used for both endpieces and temples.

Made with 38, 40, 42 mm. eye; 58, 60, 63, 65 and 68 mm. P.D. Any style temple may be supplied on special order.

Our zyloware R917 motor glass challenges all comparison in point of design, excellence of material, workmanship and finish. The shaping of the folding screens is a work of art. Bridges are angled to provide a broad comfortable bearing surface on the nose.

Made with 40 mm. eye, 63 and 65 mm. P.D.

Fall trade is just beginning. This is the time to prepare for it by stocking AOCo zyloware goods. Make a feature of them in your store and you will have reason to congratulate yourself.

CAT. NO.	DESCRIPTION	PER DOZEN
R 717	Zyloware fronts with 1688 1/10 12K heavy 1/2 flat 1/2 comfort cable smooth tip temples	$9.50
917	Dark Shell Color, with shields	18.00
R 947	Light Shell Color with shields	21.00

RETURN IN FIVE DAYS

American Optical Company
Southbridge Mass U S A



American Optical Company
SPECTACLES EYEGLASSES LENSES CASES ETC



Southbridge Mass U S A

Mr. Oculist,

Mr. Optometrist,

Mr. Optician,

Dear Sir:

One of the most vital needs of the optical business to-day is a line of gold-filled spectacles and eyeglasses that can be guaranteed with full confidence to give service satisfactory from every viewpoint; and that can be sold for a reasonable price at a fair profit.

The American Optical Company, backed by a manufacturing experience of more than eighty years, makes what is known as the "Amoptico" **Flag Line of 1/10 14K gold-filled spectacles and** eyeglasses. These are the best quality gold-filled goods now on the market.

We believe thoroughly in the "Amoptico" goods put out under our flag trademark. We know that our unequalled manufacturing facilities and organization of skilled workmen place us in a position to make "Amoptico" spectacles and eyeglasses the finest on the market. These factors we have utilized to the full.

If your business demands the use of high-grade gold-filled spectacles and eyeglasses, we urge you to ask your jobber to send you AOCo "Amoptico" Flag Line goods.

You can always rely on "Amoptico" Flag Line goods, and their use will make you many a permanent customer.

"Follow The Flag!"

Yours very truly,

AMERICAN OPTICAL COMPANY.

E. M. Wells

President.

Amoptico

Published by the American Optical Company
at Southbridge, Massachusetts

Vol. 3 | December 1914 | No. 12

"MADE IN AMERICA"

The present prosperity of the American farmer, business, and professional man is a mighty inspiration to those who have been watching the splendidly-united efforts of the American people in this world crisis.

If nothing else, it proves that Americans working together are self-supporting, and America self-sufficient.

This unity of effort does not imply any prejudice or unfriendliness towards the products of any nation. It means for you simply a firm resolve to serve your country, giving the American manufacturer that preference to which he is entitled in his own market, by using optical goods.

MADE IN AMERICA

American Optical Company



YOUR ENTIRE ABILITY AND EXPERIENCE AS A REFRACTIONIST ARE CENTERED UPON THE RESULTS OBTAINED IN THE EXAMINING ROOM.

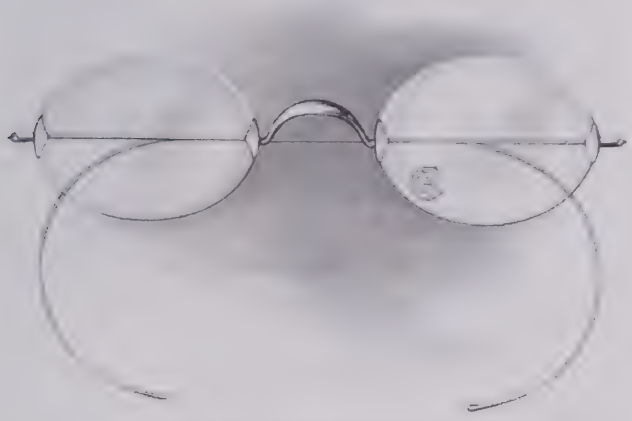
The prescription is all-important. How necessary it is, therefore, that the lenses check accurately with the prescription. You are dependent, then, on good lenses for your success. You can't afford to use any other kind. The man who takes no chances on his future knows this, for he specifies and sees to it that he gets only genuine

AOCo Centex

Amoptico

—and Now a Screwless Mounting

MOST of us nowadays can think up divers ingenious ways and means of adding new details to this already overburdened business. The patent office archives are full of freak notions which the wily inventors hope ultimately to foist upon the unsuspecting optical victim and thus win goodly lucre and undying fame. Not that we decry inventors or inventions.



Spectacle Mounting with Screwless Straps.

The man who creates something really a boon to suffering humanity or who makes the proverbial two blades grow where but one grew before is entitled to all honor, recognition, and reward; but the greatest of these is the individual who builds his ostermoor of one bale of excelsior where it used to require two—and gets away with it.

So it is with spectacles and eyeglasses. Did you ever figure the number of parts to an ordinary pair of eyeglasses? Two lenses, one spring, two studs, two guards, and four screws—*eleven individual pieces;* if cemented bifocals, *fourteen.*

A fellow who was wiser than some of the rest saw that the ideal bifocal would be made of one piece of glass. It was made, and it is a success. It simplifies, cuts down detail. It is the Uni-Bifo (Luxe) One-piece Bifocal.

There are few little details that cause more worry and annoyance to the dealer than glass screws. Glass screws are the indirect cause of many broken lenses, that come out of the retailer's profits whether the breakage occurs in the shop, at the fitting-table, or after the job gets out of the store.

Let's eliminate glass screws, then. Why stand all this breakage and consequent expense? It is a perfectly reasonable and practical thing to do this for we have developed a rimless construction in which any shape of regular lens in flat or toric form may be mounted solidly and permanently without risk of breakage. We refer to the AOCo Screwless Mounting. To be sure, you have been shown screwless mountings before and the proposition in a general sense is not new—except the AOCo Screwless Mounting, which *is* new—in fact, it is the last word in refinement on this subject. We have been very much alive to the need of such a construction. We have experimented with every conceivable design of strap. Now the final result is a strap that we feel sure will be most acceptable to the trade in every respect.

It is good-looking, inconspicuous.

It will accommodate flat or toric lenses.

It eliminates drilling, which saves power.

It eliminates screws and the attendant danger of mounting with screws.

It solves the problem of loose lenses once and for all.

It requires no special form of lens, no holes or notches.



Fits-U Eyeglass with Screwless Straps.

It reduces the danger of lens breakage to a minimum, thus making a splendid advertising feature for you, and a satisfied patronage.

It costs no more than the ordinary mounting in which screws are used.

The method of mounting lenses in A. O. Co.'s Screwless Straps is so extremely simple as to hardly



Heat strap end of lens [illegible].



Warm the strap a trifle.



Dip lens in Le[illegible]



Press lens to strap [illegible].

require any extensive explanation. In order to make it even more elementary we are showing in a series of pictures the necessary steps of mounting the lenses with the use of Lenstick. It is first essential to wash the surface and edge of the lens clean, using alcohol or ammonia if it is at all greasy. Pour out a quantity of Lenstick into the cover of jar, to the depth of one-sixteenth of an inch, then heat the strap end of lens sufficiently to melt Lenstick Cement when applied. It is advisable to warm strap slightly before inserting the lens, as this overcomes any possibility of the cement becoming chilled before it has had sufficient opportunity to adhere to the metal strap. Press the lens into strap quickly and firmly, holding it in position until cool, which will require only a few seconds. Any excess cement adhering to the metal or lens or side of strap, should be readily scraped off with a sharp pointed tool, care being used not to scratch either.

To remove a lens it is merely necessary to heat strap and lens slightly over an alcohol flame, when the cement will readily soften.

The Fallacy of Cheapness

The bargain instinct is only too prone to bias judgment of values and render us mentally myopic. The law of supply and demand governs the cost of all optical staples.

"Let the buyer beware," runs the old saying in contract law. So it is with gold-filled lines. You have, apparently, seen some tempting bargains. The general appearance of the goods was excellent; the price most attractive. The fact that those who offer such "bargains" are still in business proves that the goods are profitable to them, which, in turn, means that you get just what you pay for—perhaps less.

The use of cheap goods is a pretty poor investment for the man who hopes to face a growing list of customers in Nineteen Twenty-five. Safeguard the good will you have worked so hard to create. Use only dependable goods—goods you are proud to have your customers wear. There is one line of gold-filled goods on which you can bank your reputation as well as substantial profits: the Amoptico Flag Line 1 10 14K Gold Filled, with 1 8 14K Gold Filled Bridge and Temples.

Live dealers everywhere are getting the best trade with these goods. Will you "Follow the Flag?"

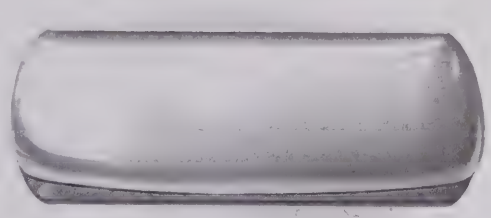


AOCo Sterling Silver Cases Capture Customers



"My, but that's a handsome case," says your customer as he leans forward to examine one of the new AOCo Sterling Silver self-closing cases. And he is right, too. You can heartily agree with him, for it is. Every one of them is a beautiful example of what can be accomplished by care in the matter of design and workmanship.

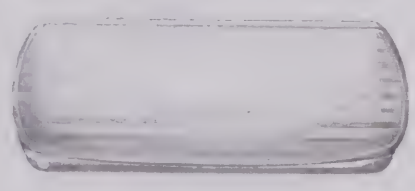
AOCo Sterling Silver Cases are a new line that we announced for the first time in last month's Ameptico. They should not be confused with others that have been on the market before. As you will notice from the illustration, they are identical in shape and size to the popular flat-top model cases that have proved best-by-test when made in steel and leather. Ends are neatly fined down and the mid-section so shaped as to give a maximum of interior space with a minimum of bulk. The lining is a fine quality green silk velvet.



No. 325, for Spectacles.



No. 715-10 Silver, for Large Eyeglasses.



No. 705-15 Silver, for Small Eyeglasses.

No matter what line of Sterling Silver cases you buy, you are, of course, paying part of your money for silver. If you pay a small price you probably get very little silver, and vice versa. AOCo Silver cases are calculated to have just the required amount of silver to insure proper wear and stiffness without being uselessly heavy and consequently uselessly high priced. You can buy silver cases at all prices, but when you buy the AOCo kind, you are getting full value for what you pay and not paying one cent more than is necessary.

Your customers will be quick to see the desirableness of AOCo Sterling Silver cases, and sales should be very gratifying.

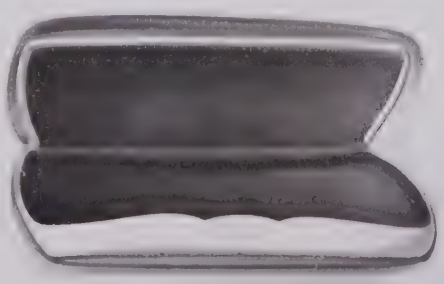
There is a choice of three styles and three sizes. Your jobber will supply you.

Plain	*Size*	*Each*
325 Silver	Spectacle	$6.75
715 Silver	Large Eg.	6.00
705 Silver	Small Eg.	5.75
Engine Turned		
325-10 Silver	Spectacle	8.75
715-10 Silver	Large Eg.	8.00
705-10 Silver	Small Eg.	7.75
Engine Turned		
325-15 Silver	Spectacle	7.75
715-15 Silver	Large Eg.	7.00
705-15 Silver	Small Eg.	6.75

Complete Trial Set Catalogue

If you are beginning to think that your present Trial Set is looking a "little the worse for wear," it is time to send for the AOCo Trial Set catalogue. Yours for the asking.

A friend of ours recently remarked that he thought we must be the Company that "put the tickle in Optical." He has had splendid success with our goods. We might add to what he said that we are also the Company that put the O. K. in Kryptok.



Quick Christmas Sales and Good Profits with the New AOCo Sterling Silver Cases

A demand has arisen for Sterling silver cases; a demand not merely from one or two optometrists and opticians, but from a large number in all parts of the country.

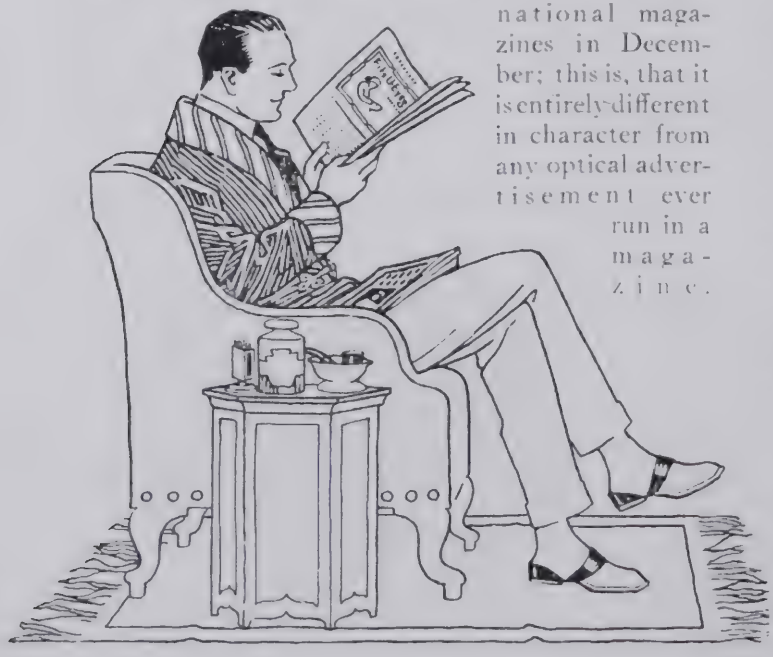
There are many Sterling silver cases on the market now—of a sort—but the reason the AOCo brings these new ones to your attention is that these are the *right* sort.

A case is salable only when it is perfectly adapted to hold glasses. We could make eyeglasses with beautifully engraved rims half an inch wide, but they would not sell. Sterling silver cases *have* been made that in some respects were beautiful examples of the silversmith's art. But—they lack that perfect design and appropriateness necessary to make them "sellers." Instead, they are too often "stickers."

Have you a friend in the optical business who does not now receive AMOPTICO? If you have we should very much appreciate it if you would write to us asking that he be put on our mailing list. We can then see that AMOPTICO is sent to him regularly. We will also be glad to write to him saying that it is because of your thoughtfulness that we are enrolling him as a regular subscriber.

How the AOCo National Advertising Campaign Was Conceived

You will be struck with one thing when you read the AOCo advertisement which is appearing in the national magazines in December; this is, that it is entirely different in character from any optical advertisement ever run in a magazine.



Perhaps you will wonder why we chose this particular style and how we came to do it. There is a rather interesting little story behind the preparation of the campaign.

When our first plans for the present campaign were being discussed, it was early decided upon that we must have the coöperation of every oculist, optometrist, and optician in the country in order to make it really successful. Our problem was:—How can we make this coming advertising of the greatest possible benefit to every user of AOCo goods? The answer was obvious enough:—Help them sell goods. Just *make* the people go into their offices and stores by the force of the advertisement. But the question was:—How to accomplish this? If we ran the usual style of advertisement, telling what a nice eyeglass the Fits-U was, and other goods bearing the AOCo trade mark, it would undoubtedly have a great effect. It would bring the name "Fits-U" before the people and wherever they saw an optometrist with the Fits-U Eyeglasses displayed prominently, they would know that here was a man handling a national advertised product. But a large number of readers would merely dismiss the advertisement from their minds, and beyond remembering dimly that the "Fits-U" was a good eyeglass, they would take little definite action towards purchasing.

So we hit upon the idea of illustrating actual scenes in an office or store and having the oculist, optometrist or optician himself do the actual talking. In that way the impression which the advertisement gave would be not simply that "Fits-U's" were good eyeglasses but it would connect them definitely with the place where they were fitted.

An expert advertising man and an artist were detailed to visit a number of the dealers in New York with instructions merely to listen and see how American Optical Company's goods are sold to the public. The advertising man did this and the artist made sketches. The result was the series of advertisements which started in November.

"I would strongly recommend the Fits-U Eyeglass, madam," begins the first ad, written just as though *you* were talking to a customer who is not quite sure what kind of eyeglass to buy. So the copy continues. But notice this most important sentence at the end of the advertisement: "Ask *your* oculist, optometrist, or optician. He knows."

By thus actually reproducing an oculist's, optometrist's or optician's place of business and putting selling talk into the mouths of men who are actually selling goods and services, we are turning the thoughts of the people towards the places where Fits-U Eyeglasses and other AOCo goods can be purchased. The campaign is based on the psychology of suggestion. Every advertisement reads with the tone of authority and we know if you will couple up your business to it, with the many dealer helps that we have to offer to you, it will surely mean increased business and added profits.

Varsity Ribbons Should Go with Varsity Eyeglasses, of Course



You remember the old poem that ran something like this:

"Apple pie without the cheese
Like a kiss without the squeeze."

Well, that is about the relation these Varsity ribbons bear to Varsity eyeglasses. When you sell one you can easily sell the other. Everyone who buys a Varsity needs a ribbon to go with it. We have a very pleasing variety from which to choose, made of fine quality grosgrain ribbon that will not fray at the edges or look cheap after having been worn a short time. The slides and snaps are made in gold-filled, 10K gold and 14K gold, while snaps are made both perforated and solid.

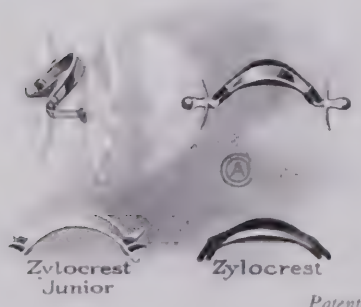
We are illustrating representative styles here that will convey some idea of the wide choice you have.

Each ribbon is packed individually in a special tarnish-proof envelope that will keep the goods always looking fresh and clean.

Jobbers carry these Varsity ribbons and can fill your orders for them. When your next order for Varsity eyeglasses goes in, be sure that it includes a good selection of ribbons as well.

Cat. No. Grosgrain	*Moire*	*Description*		*Per Dozen*
875	865	Black		$2.00
875-1	865-1	Black, with snap and perforated rectangular slide	G. F.	5.00
			10K Gold	13.00
			14K "	15.00
875-2	865-2	Black, with snap and solid rectangular slide	G. F.	5.00
			10K Gold	13.00
			14K "	15.00
876		White		2.00
876-1		White, with snap and perforated rectangular slide	G. F.	5.00
			10K Gold	13.00
			14K "	15.00
876-2		White, with snap and solid rectangular slide	G. F.	5.00
			10K Gold	13.00
			14K "	15.00
877		Black center, white edge		3.00
877-1		Black center, white edge, with snap and perforated rectangular slide	G. F.	6.00
			10K Gold	14.00
			14K "	16.00
877-2		Black center, white edge, with snap and solid rectangular slide	G. F.	6.00
			10K Gold	14.00
			14K "	16.00
878		White center, black edge		3.00
878-1		White center, black edge, with snap and perforated rectangular slide	G. F.	6.00
			10K Gold	14.00
			14K "	16.00
878-2		White center, black edge, with snap and solid rectangular slide	G. F.	6.00
			10K Gold	14.00
			14K "	16.00

They Put the "Come" in Comfort



Patented.

"Here I am, right on the job. My motto is 'Safety First' for noses, and this very minute I am sitting under thousands of 'SS' spectacles bridges bringing relief to their wearers. I work it this way. I go into an optometrist's store and wait for a customer to come in who complains that his spectacles hurt his nose. Then the optometrist immediately gets me out and shows me off to the customer. 'Here,' he says, 'here is Mr. Zylocrest or Mr. Zylocrest Junior, if you prefer. I slip him under your spectacle bridge, bend over these little clamps and fasten him right there to stay. You see he has a broad surface, so he distributes the weight of the spectacles evenly on your nose and prevents them from hurting.'

"So the customer says, 'Good, I'll take him,' and away I go to keep his nose from hurting, while the optometrist smiles and makes a bell go 'ding' on his cash register.

"Jobbers have me in stock. I'm made in three sizes; large, medium, and small. If you want me in zyloware, order me by name: Zylocrest. I cost $9.00 a gross, and 'most every one will buy me. If you want me in transparent zyloware (Zylocrest Junior) with small gold-filled attaching arms, I cost you $12.00 per gross. Believe me I'm a dandy little thing to keep on hand, and I'll sell myself a good many times in the course of a year."

Let Us Know

The postal authorities make no provision for forwarding third-class mail; therefore, if you change your address without notice to us you may not get Amoptico. Will you, then, keep us posted; in fact, look on the envelope in which this copy reached you and let us know whether there is any error in name or address? We will try to make Amoptico worth this trouble to you.

Goggles in Winter

Remember that goggles are all-year-round merchandise now. People who drive in coldest weather must wear some sort of protection for their eyes even though in some cases they may refuse to wear goggles at other times.



NEW GOODS *for* LIVE DEALERS



Liberal Profits in AOCo Varsity Eyeglasses



To be able to offer your customers the finest quality optical goods made today; to know that you are sure to make them your permanent patrons by the excellence of the goods you sell; and at the same time to know that every sale carries with it a liberal profit that will help to buy war-priced groceries: isn't that a "consummation devoutly to be wished?"

You cannot sell a Varsity—the solid gold or silver kind—to the man who has to count the change in his pocket before buying a package of spearmint gum. There is too much solid gold and expensive workmanship in every pair. Varsities go with good clothes and particular tastes. The more customers of this character you have, the higher you can boost your Varsity sales, and incidentally, your bank balance.

Varsities are "class" goods, and should be handled as such. When you display them in your window, make them look expensive. See that they have an exclusive air, a sort of knowledge of their own value. At every opportunity, see that they are brought strongly to your customer's attention. Point out with what wonderfully skillful workmanship they are constructed. Explain how long they will wear; how convenient and easy to wear they are; and particularly how distinctive and stylish they are. One's personal appearance is an asset that can be greatly enhanced by the proper kind of glasses, and a thorough demonstration of AOCo Varsities will be convincing enough of this point.

Varsity prices seem high in comparison to the price of other glasses. But point out the solid *value* of every Varsity and your customer's queries about it can be easily met.

There are two folding styles and a non-folding style in AOCo Varsities that will appeal particularly to your customers. We know this from their past sales records. One is illustrated here, and you can note their differences. We call especial attention to the stiffness of the spring on the non-folding style, No. 2642, and the watch-like accuracy with which the folding styles close.

Cat. No	*Description*	*Price per Pair*		
		40mm.	*42mm.*	*44mm.*
No. 2712 or No. 2713	14K Gold, folding	$9.50	$10.00	$10.50
No. 3712, No. 3713	Silver, folding	4.50	4.75	4.75
No. 3712, No. 3713	Silver, folding with Gold Spring	5.00	5.25	5.25
No. 2642	14K Gold, non-folding	6.50	7.00	7.50



Your jobber can supply your orders for AOCo Varsities. Send a trial order for them and be convinced that they offer a splendid opportunity for liberal profits and satisfied customers.

Watch For It

Next month we are going to say [illegible] thing important in Amoptico about a new line of neutral tinted glass. Why not neutral lenses for Americans in these belligerent times?

Two New Sizes in White Zyloware Readers—Lower Prices Too

There is just one reason why we are adding two new sizes of "Ivory Zyloware" readers to our line: we know by the way in which the Big Chief of these goods—the three-inch-lens reader we announced a year ago—has sold, that you can make good profits selling these new sizes.



No elephant was called upon to give up his ivory dome (or tusks, more properly speaking) to furnish the material for these readers. In fact they aren't real ivory at all. They are the best quality of white ivory grained zyloware on the market, the cleanest, whitest, most attractive appearing made. Probably the movement in the direction of more sanitary appurtenances in the home is responsible to a large extent for the demand that sells these readers. Be that as it may, the demand is there and you can find it—if you look. The only way to find it is to let the people have an opportunity to prove it by actually showing the goods.

We have three sizes now, with a two-inch, two and a half inch and three-inch lens. Their technical description by which to order them is given here, and your jobber will fill your call for them.

Cat. No.	*Style*	*Diameter*	*Focus*	*Per D*
R 5953	Ivory Zyloware	3-inch	+6.50	$18.00
R 5952½	" "	2½-inch	+8.00	15.00
R 5952	" "	2-inch	+10.00	11.25

Improvement in White Zyloware Trial Frames

The sanitary white-zyloware trial frame we placed on the market some months ago has been a very real success, and orders have come in through jobbers for large quantities.

It is gratifying in view of its popularity to be able to announce that an improvement is now being carried out in its construction which makes it even more desirable than before. The entire front is now made of one solid piece of zyloware with the exception of the scales. The new bridge is much larger and stiffer than the old, giving added rigidity to the frame.

We are making this Zyloware Trial Frame with double cells. Its unusual lightness and comfort in use make it an extremely valuable addition to every oculist's and optometrist's outfit. It actually weighs one-half as much as its prototype in metal. The price is $2.00 each from your jobber, and they are very much worth while.

What D'Y'Mean—Filthy Lucre?

The following from a foreign catalogue of optical machinery printed in "English" explains some of the Selling and Delivery Conditions under which you may buy the aforesaid machinery. Hashimura Togo has nothing on our esteemed contemporary.

"The committer has no reason to subside from the delivery-contract on account of little transgression of the delivery-time. If the transgression amounted more than one month the committer has only the right to subside from the contract under posture of an afterdate and to reclaim the rendered account under exclusion of any other claims. The retention of payments, any other for pretension of the committer, also any reckoning up is excluded.

"If the committer remains in delay with decrease or rest-payment of the ordered wares, we can dispose otherwise three weeks after followed exhortation by inscrib-letter, over the object of the merchant-contract. The paid earnest money is then decayed, without that we want to prove an arised damage."

THE WAR IN AMERICA

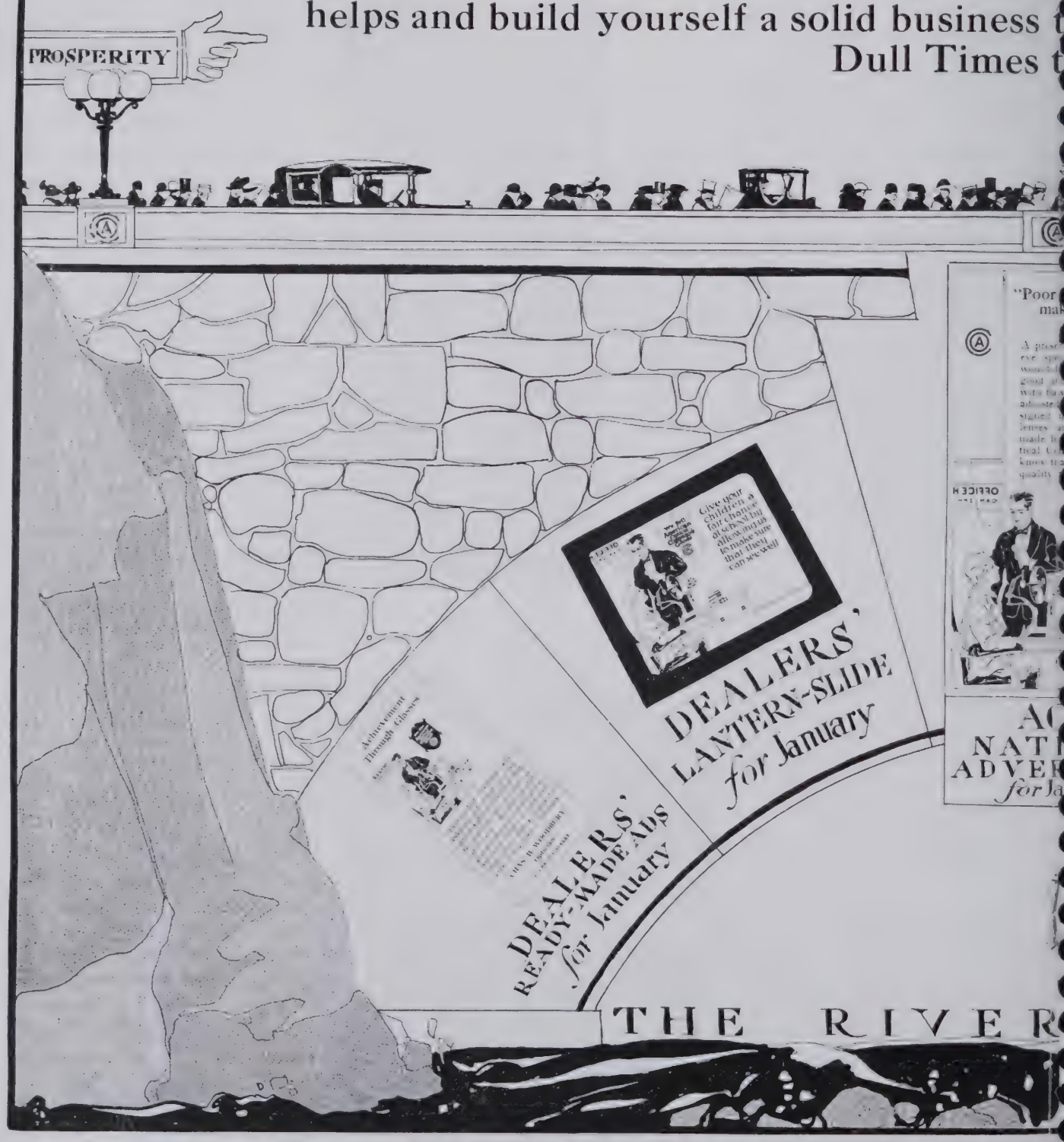
From *Collier's* Nov. 14, 1914

"Many authors living in poverty have been raised to affluence. Yesterday George Coldpack was arrested on Broadway for singing from the [illegible] he had just purchased. He was found to be the recipient of royalties from a publisher, who, in 1892, brought out his work entitled, 'German Silver and Other Alloys.'"

We are neutral as to whether we make spectacles of German Silver or Alloys. It's for you to say what you want.

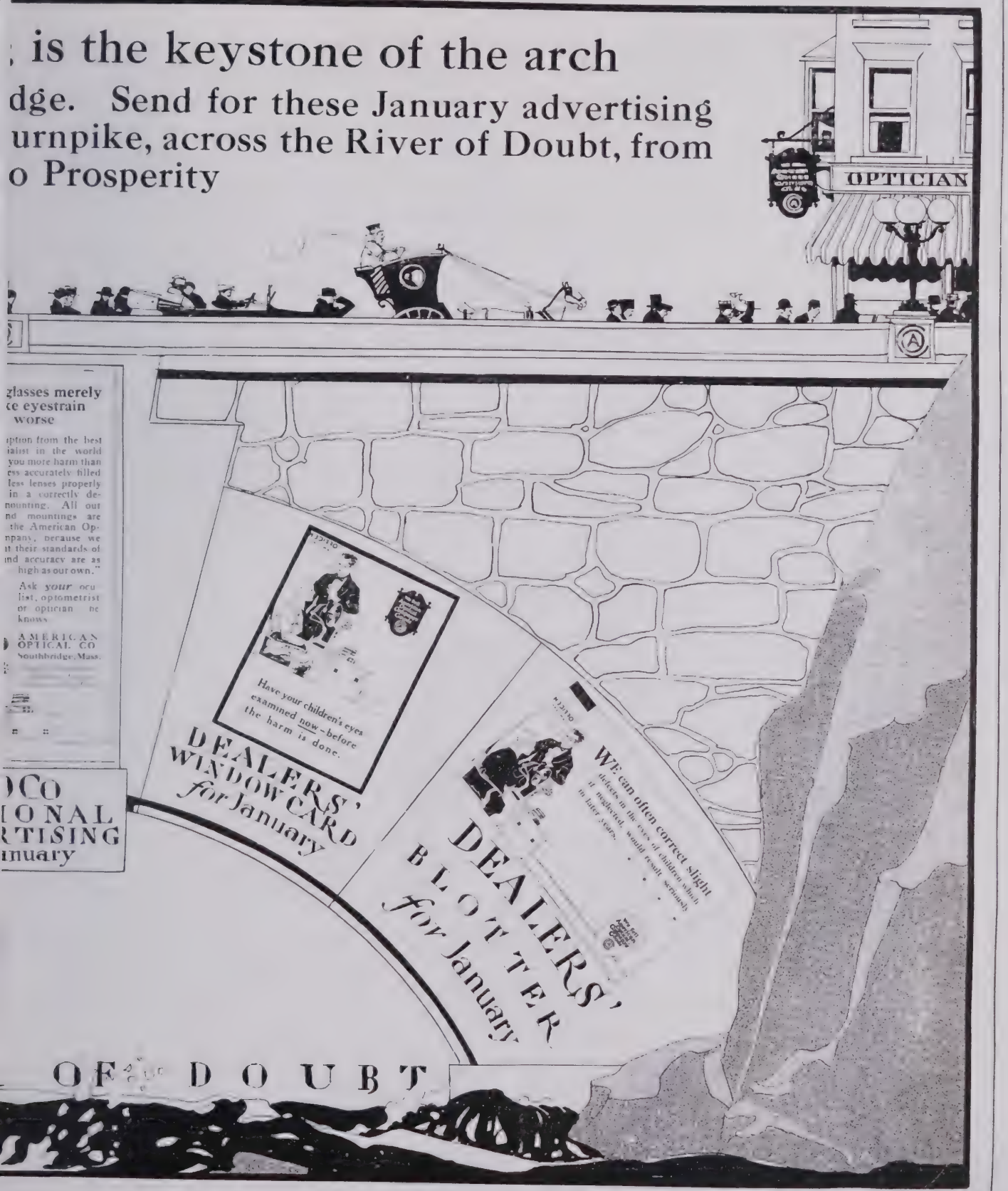
AOCo National Advertising

But a keystone alone does not make a bri
helps and build yourself a solid business t
Dull Times t



; is the keystone of the arch

dge. Send for these January advertising
urnpike, across the River of Doubt, from
o Prosperity



The Pipe Dream of Mr. Optic

"But then, why not?"

Mrs. Brown: "Oh! Good morning, Mr. Optic. I have just called to consult you about my eyes. They have been *so* troublesome lately. My husband told me to come to you, because you fixed him up so well a few months ago, when his eyes were troublesome."

Mr. Optic: "I am very glad to hear that he was satisfied. If you will step this way into the refracting room, Mrs. Brown, we will endeavor to see what is the matter with your eyes." (The lady seats herself in a comfortable chair, right opposite a Window Display Banner of the Rice Leaders of the World Association which hangs on the wall of the consulting room. The following conversation ensues.)

Mr. O: "Now, Mrs. Brown, please tell me what lettering you can read on that banner."

Mrs. B: "Why, I can see that it is a very beautiful design, and there is an emblem of some sort upon it, but I can't read anything on the banner except 'Rice Leaders of the World Association.'"

Mr. O: (Changing the lenses.) "Now look."

Mrs. B: "That is a little better. I can see, next to the Laurel Wreath on the white flag, the word 'Honor,' and on the golden flag next to the Wheat Sheaf the word 'Quality,' but that is all."

Mr. O: "Humph! Slight astigmatism." (Tries another lens.) "What can you see now, Mrs. Brown?"

Mrs. B: "Oh! That's beautiful. Isn't it a perfectly lovely design? I can read every word of it. On the red flag, against the Lion, is 'Strength,' and on the blue flag, against the Messenger, is 'Service;' and at the top 'Be Guided by this Foundation.' Isn't that a beautiful thought Honor, Quality, Strength, and Service. And what is that underneath?—'Founded A. D.'—I can never read those letters. What does it mean?"

Mr. O: "Well, the question is really, can you read it? rather than what it means."

Mrs. B: "Oh! I can see the letters quite distinctly; they are 'M C M X I I–"

Mr. O: "Well, those are the Roman numerals for 1912."

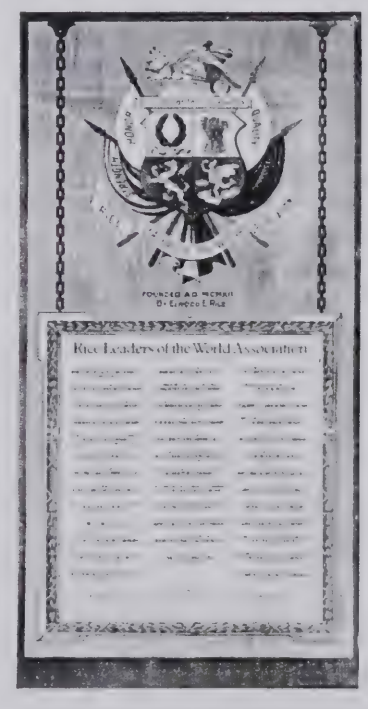
Mrs. B: "Oh! I see. Founded in 1912. I have seen the announcements of this association in the *Saturday Evening Post* and the *Ladies' Home Journal*. And on the tablet they have all the names of the large firms which have been invited to membership, don't they?"

Mr. O: "Yes, that's right. Can you read the small lettering above the names of the firms?"

Mrs. B: "Oh! Yes. Quite distinctly." (Reading.) "There is a firm there, I see, American Optical Company, of Southbridge, Massachusetts, and they make 'Spectacles, eyeglasses, lenses, "Fits-U" and other optical goods.' That's quite in your line of business, isn't it? Do you sell these 'Fits-U' goods?"

Mr. O: "Oh! Yes, certainly. For years past I have considered them the very best on the market. I should not dream of offering you any other. In fact, now that we have found just what is the matter with your eyes, if you will step out into the other room, we will see if we can fix you up with a pair of 'Fits-U' eyeglasses."

Just then, the seven o'clock whistle blew and Mr. Optic opened his eyes with a start. "Oh! well," he yawned, "Why not? I certainly could use it a little if I hung it in the right place, and it would tell 'em I sell some pretty good stuff, too. Me for it!"



GET THIS BANNER INTO YOUR WINDOW DISPLAYS

It will enable you to compete for the big cash prizes, aggregating $10,000, offered for the most effective window by the Rice Leaders of the World Association. If you have not received your banner write immediately to the Association headquarters, Fifth Avenue and Thirty-fourth Street, New York City.

We are glad to announce that by special arrangement with the Rice Leaders of the World Association, dealers in American Optical Company goods will be privileged to display the Association Window Display Banner in their consulting rooms.

This concession is made especially on behalf of those dealers who have no windows in which to display AOCo products in the Association Window Display Contest.

The Banner itself is a handsomely illuminated specimen of printing, and carries the Emblem of the Association in natural colors, together with the full list of present members.

Dealers in AOCo's products should avail themselves of this unusual opportunity for adding prestige and distinction to their stores or offices, and write at once to

Window Display Department,
Rice Leaders of the World
Association,
358 5th Ave., New York, N. Y.

The Banner will be sent by return mail.

Applications should be made by dealers upon their own letterheads, mentioning this notice in Amoptico.

Amoptico

Reg. in U. S. Pat. Off.

Vol. III December, 1914 No. 9

Published Monthly by
American Optical Company
1833-1914

Channing M. Wells, President — Albert B. Wells, Treasurer
J. Cheney Wells, Vice-President and Secretary

General Offices and Works
Southbridge, Massachusetts, U. S. A.

New York . . 15 Maiden Lane
Chicago . . 5 S. Wabash Avenue
San Francisco . 140 Geary Street
European Agency,
American Optical Company, Limited
39 Hatton Garden, London, E C
Cable Address: Amoptico, Boston
Western Union Code used

Manufacturers
Spectacle and Eyeglass Frames, Mountings and Material, Eyeglass Chains, Automatic Eyeglass Holders, Trial Sets, Trial Frames and Accessories, Automobile Goggles, Lenses, Spectacle, Eyeglass and Goggle Cases, Optical Machinery, Tools and Supplies, Etc.

Copyright, 1914, by American Optical Co.
Permission to reprint articles granted on request

Our Message to Live Dealers

WE are putting some of the best grey matter of our advertising, sales and manufacturing staff into Amoptico. Many of our readers have been shrewd enough to see it and to *act*. We can and we will go on with our monthly suggestions on new goods, old goods, and advertising and selling problems, to help the oculist, optometrist and optician. There is ample evidence that the expense we are going to in this work is repaid in actual support by the profession and trade who are giving preference to AOCo goods: and advertising would never sell the goods if the goods did not merit it—remember that.

There are many in this business who are not taking Amoptico seriously enough. We do not expect to interest everybody. But the man who does not weigh carefully what we offer to him is overlooking an opportunity which perhaps his neighbor is quick to grasp. That neighbor may have written us first out of curiosity. We have since been able to *convince* him that our plans are business-producing ideas that bring him actual, bankable profits.

We help anybody who supports AOCo goods. Our helps are given generously and they are bringing results. This is a business proposition for you and for us. Read this letter; it is one of a great many that we are constantly receiving:

"Dear Sirs:—

I have been puzzling my brains all the week trying to think up something as a model for my window to display the different style eyeglasses and spectacles on that would be suitable to attract attention and at the same time call particular attention to the different points I wished to demonstrate; and I have been far from reaching a satisfactory conclusion until this morning along comes my Amoptico with the very thing already prepared and gotten up by you in the shape of the AOCo Model Man; so I am ordering one at once to be shipped by freight through the New Orleans Optical Co. My order goes to them with this mail.

Another useful thing in this issue is the Lokseru set which I am also ordering; and placing a special add in my local paper calling particular attention of my customers to this new innovation. These instances only serve as a demonstration of the helpfulness of the Amoptico which is always chock full of valuable information for wide-awake Optometrists.

You are to be congratulated, and every optometrist should appreciate the many good things you are constantly doing for his interest. I am yours with esteem,

J. E. Briggs,
Bay St. Louis, Miss."

Sales Thoughts of An Optimist

There are certain side lines or specialties which, while not spectacles or eyeglasses, are legitimate optical goods and have the virtue of carrying a nice profit with frequent turn-overs. Amoptico mentions some of these in almost every issue—one way to keep the sales ahead of the rising costs.

One good thing about "circular lettering" for customers: you are not making your publicity so well known to your competitors. You may be able to dig in deep and pull out some of his good trade before you are discovered.

Did it ever occur to you to "make the punishment fit the crime" as the Mikado did, and write your circular letter to fit the needs of the person getting it? This can be done in cities where the population is large enough to classify. Write an appeal to school teachers, to lawyers, dentists, storekeepers, and so on. It is surprising how much more effective a letter is that recognizes the occupation of the recipient and talks about something especially useful in his particular work.

Take a leaf from the notebook of the professional window trimmer. Put a very small and carefully selected and arranged line of goods in your window *and change it frequently*. Do not emulate the pawnbroker.

You may be located on the same street with one or more department stores. Almost every one of these places a fixed value per day on its window space which is charged up to the department using the window. Your window must be worth as much or nearly as much per running foot. Whether you get value received out of it depends on what you do with it.

Concert announcements and lawn party ads in your window don't sell many spectacles for you. If your window space is worth something to the Y. M. C. A. two blocks away, how much more is the same space worth to the man in the store back of the window?

The Tide is Turning

We have consistently preached better gold-filled goods through these columns ever since AMOPTICO was launched. That message was "put over" with a percentage of the trade, which made our work worth while for everybody. The "Flag" line of 14K Gold Filled goods came, and it stayed. Those who have used it know why they are still using it. On the other hand, lots of people said (and some thought without saying so) we were wrong; that



there was no need of better goods; that the existing lines in other qualities were good enough.

Let us see what was the result; a manufacturing scramble for the lower-priced, staple lines of 1/10 12K and less sent prices down, and quality, like Jill, "came tumbling after."

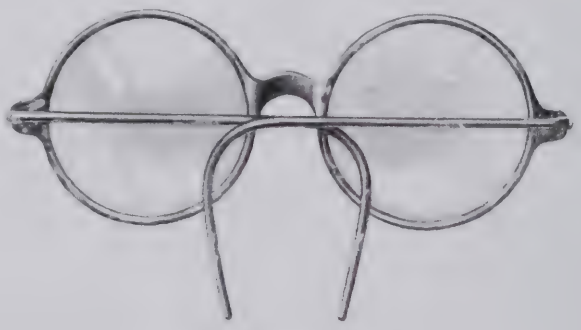
Now this condition reached the point where everybody lost, particularly the dealer who, tempted by low prices, loaded up on more or less unsatisfactory products. The trade have had enough of that sort of thing. Sadder and wiser for their experience, they are returning with the tide of demand for the goods on which they can bank their reputation and make a cosy little profit while building for permanency of their business.

The public want fair play for their eyesight. We have been through all that in the lens situation. The remarkable increase in the demand for high quality lenses proves it. In frames and mountings the higher qualities of gold-filled are coming into their own. The future looks exceptionally good to everybody in this business who has joined the army mobilizing under the "Flag." Ask any jobber about the AOCo "Flag" Line of 1/10 14K Gold-filled superior spectacles and eyeglasses having 1/8 14K Gold-filled bridge and temples.

Why Zyloware for Winter Glasses

It is a fact, which most persons who wear spectacles will admit, that a metal frame or mounting is not always the most comfortable thing in the world to wear in very cold weather. Zyloware spectacles and goggles fit in here, and, as F. P. A. says, "fill a l. f. w." Zyloware goggles do not have that cold and "clammy" feeling, especially if they fit well (as the AOCo makes do). That's a selling argument for you that will move these zyloware goggles from your window out upon the passing auto drivers and passengers. Ask for AOCo Zyloware and look for the little monogram on the endpiece.

Cat. No.	*Description*	*Per Doz*
R 617	Dark Shell color with Micoquille Amber Lenses	$15.00
R 637	Amber color with Micoquille Amber Lenses	15.00
R 647	Light Shell color with Micoquille Amber Lenses	18.00



AOCo Zyloware Goggle.

Change in Trial Set Cylinders

For several years there has been a growing demand for trial set cylinders without matting or frosting and we have made many sets to order with this improvement.

Leading oculists and optometrists claim that the frosting on the cylinders of the trial case is a real detriment as it interferes with distinct vision and is a source of serious distraction and annoyance to nervous and hypersensitive people.

This is particularly true when the axis of the cylinder is in the horizontal zone. In other cases when the patient is not at all nervous it may vitiate to some extent the examination. There may be no mention by the patient of the "white cloud seen at one side" but it would doubtless be better if it was not there.

In any event the matting serves no practical purpose. It has been handed down to us by our forbears and is a relic that can be eliminated from our testing lenses. It is true that in a general way the frosting coincides with the axis and might in the fast-disappearing test of "near enough," serve to indicate the angle of the axis, but to the painstaking refractionist of today this would be unsatisfactory.

In view of the foregoing we have, after careful consideration, decided to omit the frosting on the cylinders of all our trial sets in the future, unless otherwise ordered. In so doing, we believe we are improving our test lenses and thereby serving the best interests of users of our trial sets. Of course, the marks indicating location of axis will appear on all cylinder trial lenses the same as heretofore.

What Webster Says About "Reliability"

Did you ever think of using the word "trustworthy" when describing gold-filled goods? Of course, you have seen the word "reliable" used many times, but somehow that word "trustworthy" seems to have a different "ring" to it. Webster's Dictionary tells us they are practically the same, however; when a thing is reliable it is trustworthy—worthy of trust.

Assays of gold-filled goods are all right. They prove whether or not what you buy is up to standard.

But there is one thing better than assays.

That is, buy gold-filled goods so worthy of trust that you do not *need* to assay them. Your confidence will not be misplaced if you will tell your jobber to



send you AOCo gold-filled spectacles and eyeglasses. The AOCo makes its own gold-filled stock, knows that it is up to standard and guarantees it to be trustworthy.

On your next order to your jobber ask him to send you the gold-filled AOCo Fits-U Luxe eyeglass shown above.

Cat. No.	*Description*	*Per Doz.*
03121	1/10 12K Fits-U Luxe Patented (Ovalex) Spring with upper clamping pad and lower bearing pad	$7.50

"2121 Perrysville Avenue,
N. S. Pittsburgh, Pa.
Nov. 6, 1914.

American Optical Company,
Southbridge, Mass.

Dear Sirs:—

You will no doubt be interested to know how the timely arrival of your advertising circulars so reinforced our lines that our enemy, "Bum Business," was completely routed in the short space of twenty-four hours.

Business was very quiet and the prospects of its changing for the better seemed none too good, but just at that time along came your circulars and touched the thing off as if by magic.

For instance, one lady said she "had intended to come up some time ago but had forgotten the address;" but when she received that circular she realized that what it said about her eyes being her most precious possession was true so she was not going to take any more chances but came at once.

That sort of thing has been going on ever since, thanks to the advertising department of the American Optical Company.

Very truly yours,
(Signed) McConnell Bros.

P. S. Am enclosing one dollar for another 1,000 blotters advertising Fits-U mountings; can't be without them."

This Preachment is for the Man who has Kryptok Blanks surfaced in his own Shop

Many well-meaning people think that a Kryptok blank must always be a sort of gamble and you will never know your luck or breathe freely until you have it finished and delivered. That is not true—*if you use AOCo Kryptok blanks.*

THESE ARE THE REASONS:

a. We use perfect crown and flint glass stock to start with. It is tested and must pass inspection for index, color, clearness, temper.

b. We control the grinding of countersinks; all a uniform size and depth for a given blank.

c. We control, absolutely, the heat in the fusing and annealing process. Results are identical.

d. Finally, every blank is given a rigid colmascopic test for molecular stress. Every blank is clear and transparent. Every addition is neutralized.

When you grind Kryptoks from AOCo blanks your results are certain in advance. This is actual insurance against losses due to delay and unnecessary labor. One of our customers has actually figured a saving of one hundred dollars a month cold cash by using AOCo blanks. Time and labor is money to you no matter how you figure.

MORAL: Use AOCo Kryptok Blanks



A Short Lecture on Lenses

Gentlemen all, this a lecture! We tell you first so you will be sure to know.

There are not enough of you using the wonderful AOCo Uni-Bifo (Luxe) Onepiece Bifocals in your daily work. Now we don't mean that we are not selling many, for we are, and sales have evidently got in mind the purpose of bumping the clouds before long. But just the same, more of you should be specifying them.

We (editorially speaking) heard a lecture on psychology the other evening in which human nature was pretty well hashed up into its component parts. He (the lecturer) divided us up into sundry divisions, one of which he called "will power." Then he further separated this into "ambition" and "inertia," showing how much of our lives were allowed to slip by heedlessly because of Old Man Inertia.

Now then, isn't it partly a case of inertia on your own part if you are not using Uni-Bifo (Luxe) Bifocals? of innocuous desuetude, so to speak? (Look that up after the lecture.)

Here we have a lens that absolutely cuts out chromatic aberration; that has a practically invisible segment; and that can be ground thinner than any other form of bifocal. Furthermore, it is sold on a restricted price basis that is sure to mean big profit to you on every pair you sell.

The AOCo Uni-Bifo (Luxe) Bifocal is the culmination of years and years of patient endeavor to grind an optically correct bifocal on one solid piece of glass. It is a lens you can recommend under all circumstances.

Shake off the lethargic lassitude that holds you to a monotonous round of daily tasks.

Put new life into your business.

Take a good firm grasp of your fountain pen and send in your orders for AOCo Uni-Bifo (Luxe) Bifocals to any jobber who holds a finishing license.

AOCo Zyloware Spectacles

The call for Zyloware Spectacles continues with unabated vigor, and we are glad to push along the sale of the most comfortable easy-to-wear library spectacles now on the market. You can recommend AOCo Zyloware Spectacles with every assurance that many of their advantages are not to be found in any other makes.

Riding Temple Frame			*Straight Temple Frame*		
Cat. No.	*Color*	*Per Doz.*	*Cat. No*	*Color*	*Per Doz*
R 117	Dark Shell	$7.50	R 113	Dark Shell	$7.50
R 127	Black	7.50	R 123	Black	7.50
R 137	Amber	7.50	R 133	Amber	7.50
R 147	Light Shell	10.00	R 143	Light Shell	10.00
R 157	Crystal	8.50	R 153	Crystal	8.50

The Right and The Wrong Way to Open AOCo Cases



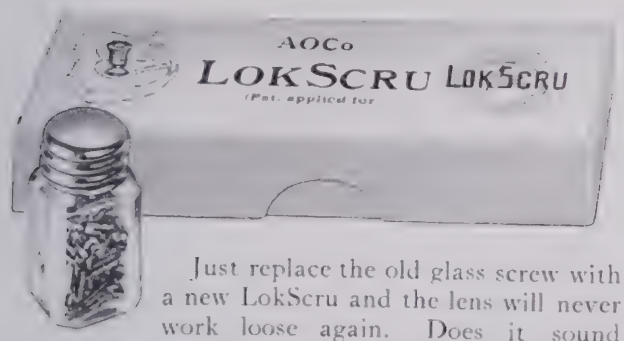
Did you ever notice that the right-hand corner of the cover on an AOCo case always projects slightly beyond the lower pocket? It's a fact, as a glance at one will show; and it has been constructed in that particular way to make it easy to open.

There is a right and a wrong method of doing everything. In this instance the right method of opening an AOCo case is to raise the cover by pressure of the thumb under the right-hand corner of the cover. The slight projection makes this a perfectly natural and easy means of doing it.

A knowledge of this little point, and the telling of it to your customers will help to make your "service" a little better than that of the next man, perhaps; and it is these little services that lead to the bigger business.

Be sure hereafter that everyone gets an AOCo case of you and understands how it should be opened and he will be "as pleased as Punch" to see how convenient it all is.

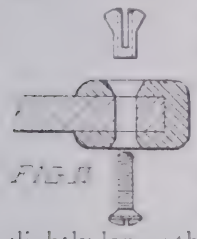
No Loose Lenses When You Use The LokScru



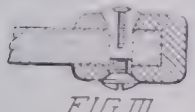
Just replace the old glass screw with a new LokScru and the lens will never work loose again. Does it sound interesting? It should, for the LokScru is a sure cure for all loose lens ailments.

For a long time we have been working to secure some form of fastening that would mean permanently fast lenses, and yet would not require the use of special bridges or straps. The LokScru is the result. Primarily it is designed for use as a repair screw. You buy a little outfit consisting of three dozen complete LokScrus, a small screw driver, taper file, reamer, and clamp. Then as customers bring in glasses with wobbly lenses you take out the worn screw, quickly ream out the hole slightly with the reamer supplied, insert the new screw—the LokScru—from one side, its little locking nut from the other, and screw it up tight. You can guarantee to your customer that the lens will never work loose again, and send him or her out with a degree of satisfaction that will mean increased business in the future.


FIG. I


FIG. II

The LokScru itself is extremely simple. It consists of a plain glass screw, and a small split nut made slightly larger than the ordinary strap and lens hole. The reamer supplied very quickly drills out the worn hole to the proper size and this allows the nut to slip into place, just level with the strap. When the screw is inserted from the other side and engages the nut, the pressure caused by the setting up of the screw draws the nut downward into its countersunk hole and squeezes it together until it becomes immovably locked. The process is simplicity itself, a few tries enabling any one to adjust it with rapidity and accuracy.


FIG III

Your jobber can supply you with the LokScru outfit, containing full instructions as to its proper adjustment and use. The price is $2.00.

The prize of bigger business goes to the man with enterprise. Don't wait for some one to tell you how good it is. See for yourself.

Twenty-Five Years of Trial Set Making

You want a new trial set. The old one is perhaps worn until it is rather shabby: the rings are tarnished and loose; some of the lenses are scratched, chipped or broken.

Take action about it now. Send for the big new catalogue of trial sets that we have just completed. There you will find pictured and described sets of every description, to fit every purse.

Away back in 1889 practically all the trial sets in use were of European manufacture. In that year the AOCo entered the field. Since then AOCo trial sets have gained the market until they are now recognized everywhere as the world's standard. Cheaper foreign labor and lower cost materials were unable to down AOCo quality.

Today our line embraces trial sets of every description. Hardwood cases are made in a variety of finishes to make it possible to match the furnishings of your office. Leather covered dress-suit case traveling styles may be had with either heavy seal grain or tan sole leather as desired.

In the twenty-five years we have made trial sets it has been our one aim never to be satisfied with what we have done. It is this spirit of progressiveness that has brought AOCo sets to the front wherever accuracy and efficiency are insisted upon.

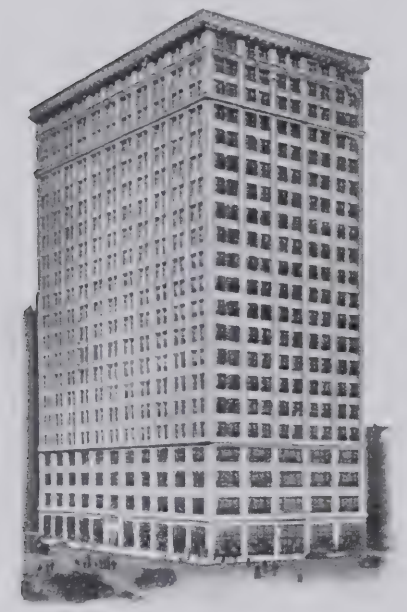
Send for our new catalogue and see what a wide range of styles and sizes there are for you to choose from. Your jobber can fill your order.

We Try Anything Once, Even the Hotel Business

We are supposed to be always upon our toes ready to tackle any job that will help AOCo to better business. A recent forward pass took us into the hotel business with both feet. Here is a picture of the AOCo hostelry for young lady employees. One of the problems of the big manufacturer today is to know that his employees are all comfortably housed.



Our Chicago Office in New and Attractive Quarters



A change of particular interest to our dealer friends in and around Chicago is that which has been made by our Chicago office during the past month. We moved from the People's Gas Building, at 122 South Michigan Boulevard to the "Mallers Building" at No. 5 South Wabash Avenue. Our office is on the twelfth floor.

We believe that this change will be very beneficial in that it brings us some blocks nearer the business center, and makes our office accessible for visitors who wish to see the splendid display of optical goods that is always there.

We extend a most cordial invitation to every oculist, optometrist, and optician to visit us at our new office whenever circumstances permit. Our Chicago manager, Mr. Frank N. Kreissl, will be glad to meet you there, and make your call an instructive as well as a pleasant one.

Advertising Campaign to Parents of School Children Wins Again

Ella C. Meade, of Albany, Oregon, was quick to take advantage of our offer to supply material for advertising her service to parents of school children and she reports that it has brought her splendid success. Her way of using the window display was quite unusual, with the natural result that it attracted much attention. In fact she asks for a further supply of circulars to continue the good work. This is advertising that pays:

"The display and newspaper cuts are splendid. I had a large window card made, bought a *real* slate just like your cards, copied the wording of one in chalk, fastened it to the card and said: 'Now is the time to have your children's eyes examined.' This I hung at the end window with your cards in the front window. Result I am fitting all the school children.

Sincerely, ELLA C. MEADE."

Free Window Signs for Winter

In our mailing room we now have hundreds of signs of a wide variety, just waiting for the opportunity to stand up in your window or in your show case and tell the people that you sell optical goods. They are doing less good in our mailing room than they would in your window. Why not make a move to *put* them in your window? It is impossible for us to illustrate all of them at one time, but we have classified them here in order that you might know just what we have available for your use. If you will tell us what kind of sign you want, we will do our best to see that your requests are given immediate attention and signs started on their way to you at once.

Fits-U Signs.

We have a wide variety of signs advertising Fits-U Eyeglasses, varying from six or seven inches to ten and twelve in size.

Kryptok Signs.

A splendid transparency to be stuck on your door or window awaits your request, printed in blue and gold. It makes a handsome, prominent advertisement of a popular bifocal lens.

Opifex Sign.

A transparency for your door or window advertising the well-known Opifex Bifocal. If you are selling these you should send for the sign.

Goggle Signs.

AOCo goggles are known wherever motor glasses are sold. We have two stunning designs, handsomely colored and finely printed. They are an embellishment to any window.

Polished Aluminum Case Sign.

This sign is unusual in that it is arranged so that two polished aluminum cases may be actually attached to the front of the sign by an elastic arrangement. It is printed on a handsome gray board in red and black ink.

Safety Bow Sign.

A silent salesman showing graphically the advantages of the popular AOCo Safety Bows. It is yours for the asking.

Make this fall a real revival in your business. Attention compelling windows will be one of the best forms of exhorters we know. You can secure them by the use of AOCo signs. Take action today

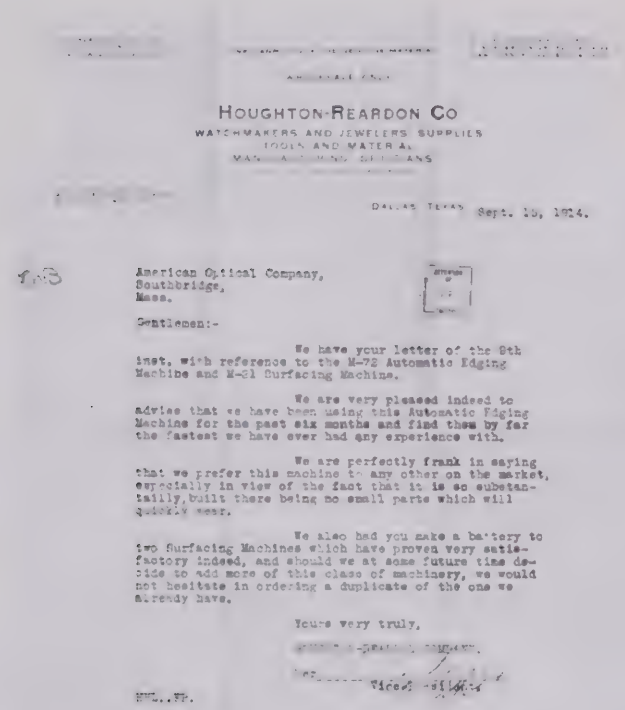
About Your Booklets and Circulars

Almost every day brings us one and often many booklets, pamphlets, or folders which are sent to us by our friends the optometrists and opticians, in order that we may see what kind of advertising they are doing. It is always pleasant to receive them. Frequently they contain ideas that are very valuable. Yet it is interesting to see what a variety of shapes, sizes, colors and qualities there are. No two are ever even approximately alike in appearance.

Just a word about them, though. Many of them seem to us to be far too long to secure maximum advertising results at minimum costs. One now upon the writer's desk contains twenty-four pages, another eight; and while the longer one is filled with small illustrations, there is nevertheless a vast amount of reading matter.

There is a limit to the amount of "copy" you can get your prospective customers to read. What that limit is, no one can tell exactly. It depends for one thing entirely on the interest the "copy" contains. But the best plan is to be absolutely as brief as you can. Six pages is usually too long for ordinary circular purposes. Four is better. Instead of trying to crowd all your facts into one booklet, try dividing them into several, and sending them out at stated intervals. This method will be cheaper, will keep your name before your prospective customers longer, and insure your "copy" being more thoroughly read and digested.

The improved AOCo Edging and Surfacing Machines have taken Optical Shops by storm



HOUGHTON-REARDON CO
WATCHMAKERS AND JEWELERS SUPPLIES
TOOLS AND MATERIAL

Dallas, Texas, Sept. 10, 1924.

American Optical Company,
Southbridge,
Mass.

Gentlemen:-

We have your letter of the 9th inst. with reference to the M-72 Automatic Edging Machine and M-21 Surfacing Machine.

We are very pleased indeed to advise that we have been using this Automatic Edging Machine for the past six months and find them by far the fastest we have ever had any experience with.

We are perfectly frank in saying that we prefer this machine to any other on the market, especially in view of the fact that it is so substantially built there being no small parts which will quickly wear.

We also had you make a battery to two Surfacing Machines which have proven very satisfactory indeed, and should we at some future time decide to add more of this class of machinery, we would not hesitate in ordering a duplicate of the one we already have.

Yours very truly,

Vice-President.

From all over the country we have received testimonial letters, telling us what splendid service AOCo edging and surfacing machines are giving. The Houghton-Reardon Co., whose recent letter we reproduce here, bought an outfit from us some time ago. *Two months afterwards we received a reorder.* This last letter explains better than could any long sales talks of our own why they reordered.

If you are in the market for optical machinery of any description, from a single small hand machine to complete automatic outfits on the largest scale, we can supply your needs and give you the very best. We ask you to write to us or to your jobber for full particulars about AOCo machines. Tell us what you need and we will tell you what you ought to have. Get your machines, through your jobber, from headquarters.

AMERICAN OPTICAL COMPANY, Southbridge, Mass.

The World's Best Spectacle and Eyeglass Cases



All water grain leather cases are not "J" leather cases. "J" is the symbol or catalog letter indicating AOCo *water grain* leather—and there's an important difference.

Why is there a difference? Because the AOCo uses only the best water grain leather on the market for cases. The AOCo is the largest consumer of leather for case coverings. A million square feet a year does not fill the demand for AOCo cases; consequently, in the leather market the AOCo gets the best hides, the first selection; only perfect skins carefully picked out by one of its own leather experts. That is one reason. There's another.

Every piece of leather for each individual case is cut from the hide by a skilled operator who knows leather, and who selects each piece with reference to the direction and quality of the grain. Any pieces showing imperfections such as scars, shot holes, scratches or stains are rejected—scrapped.

If you will remember these facts when you buy cases and bear in mind, too, that it is a matter of insurance to you to specify distinctly, that you want AOCo "J" (water grain) leather cases, you will always be satisfied.

705 J for regular Eyeglasses
715 J for large Eyeglasses
325 J for Spectacles

Amoptico

Published by the American Optical Company
at Southbridge Massachusetts

ol. 3 January, 1915 No. X





A Prediction

AOCo Screwless Mountings

We believe in a cemented construction for rimless mountings. We think it is here to stay. Whether we are right or not remains to be seen. For the present the man who is courageous enough to try a new proposition should feel that the AOCo endorsement carries with it some assurance of success.

We did not rush into this field without a thorough study of the several problems presented; so we feel that the AOCo construction is the safest proposition for you to tie up to.

A screwless mounting is the logical step. The time has come to take that step. The AOCo Screwless Mounting is an advance in the right direction so far as a judgement based on eighty-odd years of cumulative optical experience is able to point the way.

If you believe with us that this is your opportunity, then you will be particularly pleased that we are able to announce that

The AOCo Screwless Construction will be supplied on all styles of AOCo rimless goods in all metals and qualities at

No Extra Charge Over Regular Prices

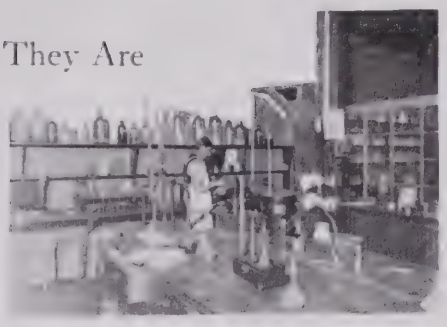


The Inauguration of Sir William Crookes Glass and The New Year

You Have Been Waiting for Both—Here They Are







UR pleasantest duty in many a day is to write the introion of the New Year and okes Glass under the same ion in this number. It is one in the right direction.

Sir William Crookes needs no oduction to thousands of ple. As one of the foremost ntists in the world, his part the discovery of the X-Rays, now of Crookes Glass, has ught him forcibly to the attenof the public.

ith keen appreciation of all ctors involved and the probs confronted, therefore, we der it fortunate indeed that ould be the first to produce, e the first to market, this uct, after six years of exhaus laboratory experiment and arch. That he succeeded ugh all the vicissitudes and appointments that go hand-and with research work is a t credit to him and a mani advantage to us. What this s in terms of your advanis that after a great expendi of time, money, and energy are provided with a colored in which you can make a id profit while supplying a felt demand for a scientific colored glass, which be safety-proof against the much maligned violet ray. The prestige of such a glass under a name, with all its implied wealth of experie and knowledge, should go far to ensure its ess. So should you when your profits are thus ed.

, however, before we enlist facts to prove superiority to you beyond our mere say-so, we must begin with the conditions out of which Sir William Crookes arose, successful.



Sir William Crookes

Born: June 17, 1832. Chemist and Physicist. Studied chemistry and later became assistant (1851) at the Royal College of Chemistry. Assistant, meteorological department of Radcliffe Observatory, Oxford. Discovered thallium and monium. President British Association (1898). Knighted in 1897; received Royal (1875); Davy (1888) and Copley (1904) medals of Royal Society. President of Chemistry Society and Institution of Electrical Engineers. Mostly independent research work since.

Discovery of Injurious Rays in White Light.

They began with the discovery that certain chemical or ultra-violet rays in the spectrum had an injurious effect on the mucous membranes of the eyes. Precedent to and leading up to this discovery, however, there were several steps of experiment on these rays. It was found that they would change the colors of various materials, such as glass, would bleach hair and different tissues, and also destroy bacteria, thereby sterilizing food.

This last named property led scientists to investigate the action of these rays on human tissues, and it was found that electric ophthalmia, a form of inflammation of the mucous membranes of the eye, was chiefly caused by these rays. From this knowledge can be traced the inception and use of all colored glass down to Crookes glass, which has successfully passed every ophthalmic test that human ingenuity can devise for it. But the development of Crookes glass was slow. It was accompanied in its course by the more or less exhaustive research of other scientists, the unscientific prescription of all kinds of colored glass by others and in general by the non-scientific manufacture of shaded glasses.

The Beginning of Popular Demand.

Gradually the layman began to learn about ultra-violet rays. The general public had instinctively





The Entrance of Sir William Crookes

realized for a long time, without knowing anything about ultra-violet light, that it was pleasant and restful to wear glasses of certain tints and colors. The colors were usually selected either because someone said such and such a color was good or because this or that color happened to be in fashion.

For instance, green was the first colored glass worn because green vegetation was known to be restful to the eyes to look upon; hence it was thought that a green glass would have a similar restful effect. However, green went out of fashion and next, blue glasses of the same color as the sky were used, doubtless because they were pretty and easy to make. These were not restful and their popularity was of short duration. Next came a neutral tint of so-called smoke glass, and this probably supplied the popular demand for a longer period than any other.

It was noticed that windows in very old buildings had been transformed into a sort of amethyst tint by the sunlight of many years, so amethyst glasses were produced and doubtless the wearers were persuaded that they were benefited. Doubtless other colors, red and yellow, were probably worn to some extent; but all these glasses were produced without proper scientific reasoning behind them. Popular demand was now accelerated, however, and all sorts of colored glass was used on the hit-or-miss idea that most any glass would do as long as it was colored. Many of these non-scientific colors are still used. This brings us now to

The Period of Scientific Experiment.

The popular demand soon focussed the attention of scientists on the subject. Then began the period of close experimentation. In 1887 the Germans trained their minds on the subject and Dr. Fieuzal produced the first scientific glass which bears his name, and still has great and deserved popularity. Others followed; amber was found to be excellent, and great progress was made up to the year 1909. The best minds were all intent on the problem of how to invent a glass designed to absorb ultra-violet rays and at the same time let in the light as usual, retain the natural colors of objects, and keep the field of vision clear. But to accomplish this was a difficult task. Most of the glass produced had grave defects; it cut out most of the ultra-violet it is true, but in doing so it also cut out considerable light so that one could not see clearly through it. Then too, it was often so dark in shade as to be unsightly, a fact which discouraged its use. The public was forced, therefore, to make the best of a situation and accept that glass which least hindered the normal vision while destroying the harmful rays.

It was the search fo colorless, scientifically c rect glass, capable of ting in light and destroying ultra-violet rays at same time, that now leads us to Sir William Crool His work began in a slightly different field—h rays—at the invitation of the Royal Society in 1(His researches on heat rays soon carried him afield into the different realm of chemical ultra-vi rays, and upon this latter subject he put all benefits of his vast experience, and the keen anal of a razor-edged intellect. His endeavor was make a glass which would not alter the colors natural objects or be so dark as to hinder the visi

Heat Rays and Violet Rays.

A word of explanation as to what are heat r and chemical rays may not be out of place. W sunlight or any artificial light such as the light fi an electric arc is allowed to stream through a nar slit in an opaque body, a beam of what is ca white light is observed. If now a lens is placec the beam, the rays will be brought to a focus; then if a prism is put at that focus, the path of beam will be diverted from its course, and can thrown upon a screen not as white light, but s up into a colored band, like a rainbow.

This colored band is called a spectrum, and colors appear in the following order: red, yell green, blue, and violet.

These colors can all be distinctly seen, but addition there are present in that spectrum invis rays. At the red end, these are called infra-rec heat rays, and they can be detected by a sensit electric thermometer called a thermopile. T stretch out some distance beyond the red end of visible rays.

At the violet end there are invisible rays ca ultra-violet or chemical rays, and these can li wise be detected by their chemical action or photographic plate; also by the fact that th possess the property of causing certain organic s stances like quinine to become fluorescent.

Having then a ready means of testing for th rays, it becomes a simple matter to interpose she of glass between the source of light and the spectr and see what rays are cut off. By refining the paratus used for these tests, the amount of the visible rays at each end of the spectrum and amount of visible rays that are cut off can be curately measured.

Crookes' Problem.

The problem before Sir Wm. Crookes was, th fore, to produce a glass which, by these measur



s, should prove itself able to cut off the ultra-let chemical rays from one end of the spectrum l the infra-red heat rays from the other *and yet reduce the amount of visible light.*

Crookes' Method of Attack.

How did he attack the problem? In the prepa-tion of his glasses he made a clear colorless glass serve as a basis, within which he incorporated rious metals in combination with oxygen or other nvenient substances. Not including the pre-minary tests Crookes made up over 300 different ixtures, the compositions and optical properties f of which were accurately determined. This was last a scientific, accurate way of attacking the oblem. But let's see what results there were.

After experiments extending over many months, rtain metals were chosen which gave promise good results, if combined with each other so at the advantage of one should overcome the short-comings of any other of one, two, or more metals. bout twelve such metals were chosen; obviously e number of combinations of these in different op rtions is well nigh innumerable.

Crookes' Solution of the Problem.

But now for the actual results! The experiments Sir Wm. Crookes finally produced glasses that: (1) cut off 98% of the heat rays; (2), cut off all e invisible and harmful ultra-violet, or chemical, ys and (3), let in 99½% of visible light. But se properties were not all contained in one glass. ny one glass contained all these desirable proper-s it would manifestly be ideal. Unfortunately, such glass has yet been made, and the best ught on the subject inclines to the opinion that s extremely doubtful if such a glass ever will be duced. The next best thing that can be produced a glass—Crookes Glass—which will cut off most the ultra-violet rays and at the same time only ace the illumination imperceptibly.

Two Kinds of Crookes Glass.

Sir Wm. Crookes has perfected this in two shades. ombines in the highest degree the ability to cut ra-violet and heat rays and at the same time the passage of a maximum of visible light. e shades we have adopted for ophthalmic lenses designated as Absorptions A (light), and B).

The first, A, is a very pale neutral tint, so pale appear colorless to the casual observer, when as spectacles or eyeglasses. It lets through % of visible light, and cuts out the harmful ultra-e rays, and 40% of the heat rays. Its refractive x is 1.523. Objects appear in their natural rs and the injurious rays are removed.

The second, B, is a medium neutral tint, designed cut down the glare of any strong light. It lets through 84% of visible light and is equally efficient in cutting out the ultra-violet while absorbing 40% of the heat rays. Its refractive index is also 1.523. With this shade the glare is removed, natural colors appear as usual and the injurious rays are cut off.

What About You?

Sir William Crookes has done his work extending over six years of ceaseless experimenting, involving time, money, and the exercise of his priceless experience. We believe he has produced the most scientific colored glass yet made. But all this is lost unless you are prepared to meet new ideas, appraise them and *adopt them for your use.* We are prepared to back it with our endorsement and after great expense to ourselves we have verified it to our own satisfaction. We are not given to the endorsement of fanciful, impractical ideas and inventions. Neither are you!

Crediting you with sound business sense and a forward-looking spirit, therefore, we'll now tell you *Why* Crookes Glass is the best yet made and *Why* you should use it. We have explained *What* it is.

Reasons Why For Crookes Glass.

In the first place, it is the product of rich, long, and varied experience; the immediate result of six years' experimentation and elimination by one of the world's foremost scientists. It is an ultra-scientific product.

Second, this is the first time that a tinted glass has ever been produced for optical purposes which cuts out so much ultra-violet light without changing the natural colors of objects. Other glasses either alter the natural colors completely, reducing the vision at the same time as the ultra-violet rays, or else dim the natural colors so as to hinder the sight.

Third, Crookes glass is not unsightly. The light shade, to the casual observer passes for ordinary optical glass. In the dark shade its slightly perceptible color is beautiful; its physical properties afford splendid relief from glare for people with sensitive or weak eyes. It preserves the beauties of nature's colorings, merely softening them down to a bearable level.

Fourth, it gives the same relief from brilliantly reflected sunlight as ordinary smoked glass; and it does this without perceptibly dimming the colors (when the light shade is used) while at the same time scientifically cutting out all the harmful ultra-violet light rays. When the light shade is prescribed by you for a patient, it appears practically no different from ordinary optical glass. But your patient feels the difference in a diminishing of reflected light, and the eyes are safeguarded from the ultra-violet rays. In fact the elimination of the glare seems to bring out the contrast of colors clearer than ever and make them even more beautiful.

Fifth, Crookes Glass undoubtedly fills a crying need, and one peculiar to every locality. Now is the time for the hustler, the progressive oculist, optometrist, and optician to see that its wonderful

Amoptico



advantages are clearly and quickly explained to patients. They should be given the immediate opportunity to purchase lenses ground from it.

Sixth, it can be adapted for a variety of uses:

The A absorption should be worn indoors for reading, and especially for work requiring close application under artificial light. It will be found extremely beneficial when attending motion picture shows, as large quantities of ultra-violet light are reflected from the screen.

The B shade should be worn outdoors in bright sunlight to relieve the eyes from the glare of water, pavements, or snow. This elimination of glare makes distant objects appear much clearer, and hence is useful for shooting and hunting. It should also be worn by people addicted to headaches caused by the glare of too strong a light.

Seventh, you can make a splendid profit from it. Crookes glass is very hard and runs high in quality, due solely to its scientific manufacture. You may prescribe it with perfect confidence. It can be ordered from your jobber in either light (A), or dark (B), absorptions. He can make up your prescriptions or supply blanks from which you may grind the lenses yourself. Use tools of 1.523 index if grinding yourself, and your results will be accurate. Specify lenses or blanks made from Crookes glass by the AOCo. Read! Be convinced! And Order! *DO IT NOW.*

Trade Price per Pair		*Uncut*	*Edged*	*Edged and Drilled*	*Min. Retail Price*
BLANKS					
Flat	$0.45				
Moulded	.60				
FLAT SPHERICAL					
0.12 to 2		1.00	1.25	1.50	3.00
2.25 to 4.25		1.10	1.35	1.60	3.00
4.50 to 6		1.25	1.50	1.75	4.00
6.50 to 8		1.50	1.75	2.00	4.00
MENISCUS					
0.12 to 2		2.00	2.25	2.50	5.00
2.25 to 4.25		2.25	2.50	2.75	5.00
4.50 to 6		2.50	2.75	3.00	6.00
6.50 to 8		2.75	3.00	3.25	6.00
FLAT ROUGH CYLS.					
0.12 to 2	$1.50				
2.25 to 4.25	1.75				
4.50 to 6	2.00				
6.50 to 8	2.25				
FLAT CYL. & SPH. CYL.					
0.12 to 2		2.00	2.25	2.50	5.00
2.25 to 4.25		2.25	2.50	2.75	5.00
4.50 to 6.00		2.50	2.75	3.00	6.00
6.50 to 8		2.75	3.00	3.25	6.00
ROUGH TORIC CYL.					
0.12 to 2	$2.50				
2.25 to 4.25	2.85				
4.50 to 6	3.20				
6.50 to 8	3.55				
TORIC PL. CYL. & SPH. CYL.					
0.12 to 2		3.00	3.25	3.50	7.00
2.25 to 4.25		3.35	3.60	3.85	7.00
4.50 to 6		3.70	4.05	4.30	8.50
6.50 to 8		4.05	4.40	4.65	8.50
PRISM EXTRA		1.00	1.00	1.00	1.00

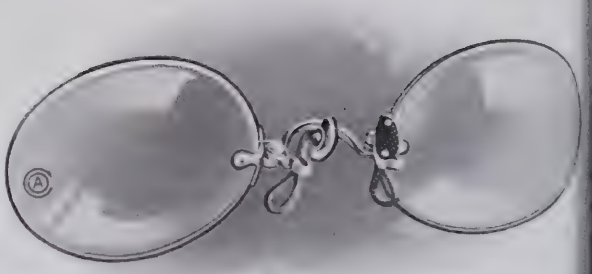
A New Year's Greeting.

American Optical Association Distributes Praise

"Dear friends,

Want to at this time congratulate the American Optical Company for its splendid co-operative publicity work in educating the Glass Wearing Public to more and more fully realize that in the wearing of glasses it's not a question of how *cheap* but how *good*."

(Signed) E. E. Arrington,
Secretary, A. O. A.



Almost Invisible Eye-Wire

We have a style—it's not new—that is just coming into vogue. It's the almost Invisible Eye-Wire glasses, whose delicate, fine metal rim, running around the edge of the lens, with a frameless mounting, gives the last touch in neatness, beauty and refinement.

Here's something distinctive and inconspicuous for you. We have sold it in special lots for years, but now popular demand is forcing us to market it in larger quantities.

How do we know the public wants it? Because our travelling representatives have written us repeatedly that the Invisible Eye-Wire is destined to become popular everywhere. From the West they report a constantly increasing inquiry for this line of goods, not alone in the big centres, but in small towns as well.

Are you prepared for this innovation? Are you alert to see a big opportunity in this seemingly small improvement? If you keep your hand on the pulse of changeable public taste, you'll follow the

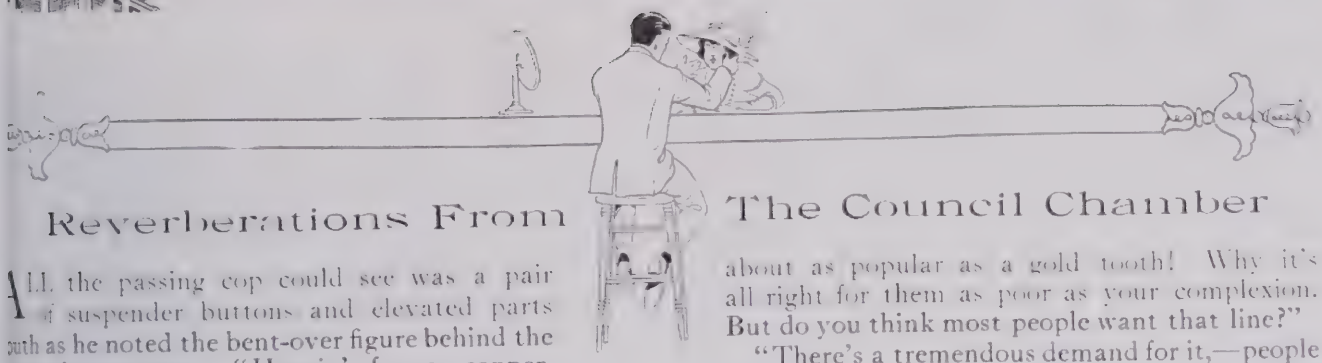


scent we've given you and lay in a stock of Invisible Eye-Wire Rims against the coming call. They appeal to Eye and Reason alike—your customers will appreciate this without argument when you push them. We put the "In" in Invisible. You take it out by showing them to your customers.

We have two styles:—one a round, a delicate fine eye-wire; the other, flat, and wider but almost nigh imperceptible as it lies along the periphery of the lens. Your jobbers are waiting for you!

	ALUMNICO *Per doz.*	ALUMNICO, B. E. *Per doz.*	
Sizes 0, 00, 000, 0000	$1.50	$1.50	$

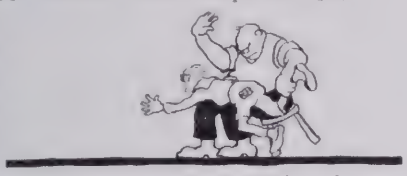




Reverberations From The Council Chamber

ALL the passing cop could see was a pair of suspender buttons and elevated parts outh as he noted the bent-over figure behind the ptician's counter. "Huntin' for a copper, kely," he mused facetiously and passed on.

Inside, the old eight-day went "kryp-tok! ryp-tok!" unphased by the muffled street noises nd moan of the wind fighting to get in. Swish! he exposed altitude of the optician felt the rearward ffect of a gust of wind as it swept over the counter. Worse than one of the old man's spankings," he uttered as it rought him smart- to the perpendic- lar simultaneous ith the slam of the oor.



"Well, I'll be ——", "Nobody knows that better han St. Peter" cut in his friend the long absent achinery salesman. "But say, you're as welcome s the ——", "Oh! yes, I know all about botany; tudied it from log to telegraph pole. What you're ettin' at without ifs or buts is where I've been since rst February, friend Toric. Now why didn't you me right out tactful-like and say 'Greetings, ozen North, whither bound?' instead of standin' ere like I was your dead partner come back for a glare!"

"Well, I've sure missed you like a pocketbook, old y," whimpered Oliver Optic; "seemed like you 'er was going to smut up my floors and atmosphere y more."

"Outside of your callous request for a coin morgue, don't mind admitting your shop's been on my nd considerable. You see, I went and got married a darned goat—an' it's been 'gorilla' warfare er since. Every time I said 'optician' to Sadie ounded like a Southbridge picnic or the 'Face on Bar Room Floor' to her. No! sir! couldn't away once when I was home. But what's your uble, you old Menis - cus. A long time since I g in on your old settees. Come—out with it," breezed, suiting the action to the word and producing a pair of gold-filled specs with a flourish of the left hand. "Out with it, gloomy Gus, I'm rubberset for your troubles!"



Southbridge Picnic

"What've you got there?" chirped up Toric. t me sell you a new pair of 1/10 12k Gold-Filled ctacles!"

What? 12k Gold-Filled? Say that's just about as popular as a gold tooth! Why it's all right for them as poor as your complexion. But do you think most people want that line?"

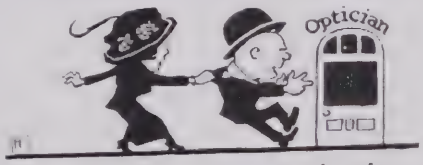
"There's a tremendous demand for it,—people invariably ask for 12k Gold-Filled frames," said Sir Oliver with a triumphant air of finality.

"Sure, because you and all the rest on the ostrich farm duck your profitable 14k Flag line leavin' the wrong end exposed—just like you did when I came in here—and think the public's goin' to sniff it out blood hound fashion. Seein' is believin' with them! If y'ever saw Sadie you'd know it, I'm tellin' you! Dig out your 14K and go to it!"

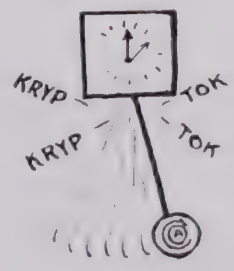
"Strange, I never quite thought of it in that way," mused the optician. "S'pose I really could sell such expensive goods?"

"Why, man alive, it'll be *next* February 'fore I see my wife if you're going to catch ideas slow as that! You'd be a fine citizen to marry Sadie. I ain't sayin' you shoulda or shouldn't but you've so much knowledge o' human nature you'd be meat for her.

"Looka here, I can just take her when she's fightin' expenses for dear life, cuttin' down everything from bills to shirts—and I can get her just plumb hungerin' for 10 Karat, then 12 Karat and end up with her buyin' the heaviest 14 Karat you've got! You don't catch me trying it on her though—it'd cost *me* money—but that's human nature—always hungerin' for the best, whether it can afford it or not, an' all you got to do is learn how to play on it like a pianner—only be sure you end up strikin' the high notes!"



"Well, I'm convinced," said Meniscus with a shrewd twinkle in his eye, "but since you've convinced yourself, too, you might as well let me make you a pair of our Flag Line 1/10 14K Gold-Filled Fits-U."



"Sure, why not? I believe in practicin' et cetera, et ceteray," signalled the salesman. His thoughts then gave a homeward turn as he disappeared precipitately with an "I'll be in for them tomorrow," and a blithe rejoinder, a "14K" man to the core.

The old clock resumed its staccato, kryp-tok! kryp-tok! kryp-tok! as the optician put up his case cloths for the night.

Goods for the World's Markets

Conditions of demand vary so throughout the world, arising from customs, tastes, and methods of measurement peculiar to this or that locality, that every American concern operating abroad is sooner or later faced with the necessity of adapting its goods to these differences in the communities it hopes to serve. The American Optical Company is no exception. Since the introduction of our goods into almost every country of the world we have met with a demand on spectacle and eyeglass frames so varied as to cause us in the course of time to practically replenish and readapt our foreign stock.

In the process of catering to foreign demand we have had occasion many times to adapt ideas suggested, for our own use here at home, so excellent were they. It is not by any means true or just, therefore, to say that there are not often good reasons for the alterations and special constructions required by the foreign trade.

Of course we depend very largely on Mr. J. P. Petherick, the manager of the London Agency representing our lines, and his staff, who take care of most of our foreign trade; we rely largely on his intimate knowledge and information about the requirements of European and other export markets. Although we believe the sample collection of our optical goods in this London office is one of the most interesting and varied in existence, and would have everybody visit it, yet we realize it would be impossible for the majority of the English dealers to do so.

We have, therefore, decided on the next best thing—to devote more space in Amoptico to the foreign trade in a get-together movement for our mutual benefit. We shall begin by endeavoring to illustrate and describe the most popular styles of foreign frames, calling attention to their distinctive advantages. We should greatly appreciate suggestions from you, either for *our* improvement or to tell us of yours.

British Goods.

To begin with we wish to call attention to the best seller in Gold-Filled frames in Europe, which is our No. 1646, made with the small "21" end-piece. In the U. S. A. the 1638 frame with the split joint end-piece is the one most in favor. However, European opticians prefer the cap-joint end-piece, frequently called the English style end-piece. From the wearer's point of view both end-pieces are extremely neat and satisfactory. From the standpoint of the fitter, we think the 1638 frame is preferable; but the question of advantage or disadvantage is not our concern here. We are anxious to supply whatever frame is wanted. Many of our friends abroad prefer the 1646/21 end-piece, made with screw dowels instead of threadless pins, and we are furnishing frames made accordingly, as you can readily see from accompanying illustration.



Except for the end-piece the 1638 and 1646 frames are almost identical. Both are made according to one special patented stiffening process and embody all the advantages so well known and appreciated in our Gold-Filled lines. The 1646 frame is made in the following qualities:

1646/21	1/10	10 K	Cable Frame	29/- doz.
1646/21	1/10	12 K	" "	30/- doz.
1646/21	1/10	14 K	" "	34 9 doz.
1646/21	1/10	1/5 12 K	Bridge & Temple	37/6 doz.

and also in the Flag line, which is conceded to be the leading Gold-Filled line on the market,

4036/21	Cable Frame	39/- doz.

Ask your wholesaler to send you some of these frames on your next order.

Must Have Been a "C" Post!

A Rap on the Head's Worth 10 Pairs of Glasses

Blind 18 Years, Hits Post; Sees

(Boston American, Dec. 16)

After being stone blind for nine years and practically sightless for nine years before that, Frank H. Haynes of Hyde Park, once a famous horse racer, can see. He

When arising from his bed and groping about with his hands, he suddenly struck the post. - - - Immediately sight was restored.

Amoptico

Reg. in U. S. Pat. Off.

Vol. III January, 1915 No. 10

Published Monthly by
American Optical Company
1833-1915

Channing M. Wells, President — Albert B. Wells, Treasurer
J. Cheney Wells, Vice-President and Secretary

General Offices and Works
Southbridge, Massachusetts, U. S. A.

New York 15 Maiden Lane
Chicago . . . 5 So. Wabash Avenue
San Francisco . . 140 Geary Street
European Agency,
American Optical Company, Limited
39 Hatton Garden, London, E C
Cable Address: AMOPTICO, Boston
Western Union Code used

Manufacturers

Spectacle and Eyeglass Frames, Mountings and Material, Eyeglass Chains, Automatic Eyeglass Holders, Trial Sets, Trial Frames and Accessories, Automobile Goggles, Lenses, Spectacle, Eyeglass and Goggle Cases, Optical Machinery, Tools and Supplies, Etc.

Copyright, 1915, by American Optical Co.
Permission to reprint articles granted on request



Taking Stock

NEW Year's is the time for taking stock. In business it is a necessary process; as a mental exercise it is a convenient date prescribed by custom for the assaying of past and future actions.

This New Year looks over the Sun Dial on a world well-nigh entirely involved in chaos. He sees the greatest upheaval in world's history left to him as an heritage by the year which has just passed on. And yet—most significant of all—he finds us still taking stock amid chaos and looking forward *during his reign* to prosperity and all the emoluments of improved conditions. Had he seen us last fall he would have viewed a people thrown into temporary disorder by the suddenness of the tremendous cataclysm. He now sees the marvellous recuperative powers of a forward-looking nation of individuals, united in name and action.

We are of the firm opinion that fundamentally conditions were never better. This is at once a declaration of faith and basis for future action. The country is sound financially, crops were the best ever produced, and whatever slowness has characterized our business machinery in the past five months has not been dictated by any fundamental defects in it but by the simple need of courage and close observation in order to determine the effects of the European catastrophe before calling again for full speed ahead. This much too must be remembered—the optical business has been singularly free of the disturbances which have temporarily affected other businesses.

In our taking of stock then we have many things to show—besides Christmas presents—for our virile optimism at this time. And not the least of these is our confidence in the year of record-breaking coöperation and enthusiasm to come between the AOCO and your worthy selves.

The AMERICAN OPTICAL COMPANY wishes to acknowledge its indebtedness to you for your coöperation in marketing the year's output, and to wish you the compliments of the New and Bigger year—1915. We are indeed fortunate in our friends.

"Made in America"—AOCo Watch Crystals

After exhaustive investigation and long consideration of the opportunities for profitable service to American trade, we think we have shown commendable judgment and initiative in going after the foreign and domestic watch crystal business. By this time the news has spread broadcast that we are the first of the great American manufacturers to bid for the watch crystal business in these still United States; not only that but we are seeking the world's markets for this product.

Just why, outside of individual limitations, the American manufacturer has never tried for this business, amounting to twenty million crystals yearly in this country alone, is the history of almost every American business enterprise competing with foreigners under a low tariff. The low cost of labor to the foreign manufacturers has forbidden it. By reason of this low cost of labor abroad, foreign manufacturers have been able to build up a monopoly on the manufacture of watch crystals. These factors made the American manufacturer, in view of the risks involved, unable and unwilling to enter into the watch crystal business.

That it will be possible hereafter to obtain "Made in America" crystals from jobbers of watch materials will be good news to American jewelers. That these will be made to accurate standards of sizes will be an innovation welcomed by American watch case manufacturers, who, on account of the inaccuracy of imported crystals have never been able to standardize the bezel rings, the only part of the American watch not interchangeable.

Decide the Gold for all time—

HOW much of your time and money have gone into experiment in an
willing to adopt as your permanent standard? Many dealers hav
Because we are fully alive to existing conditions, we set for our
coincident with yours. We feel that this news will be welcomed, for t

The answer: FLAG (Amoplico) LINE 12k and

AOCo Flag Line goods in 14K Gold-Filled, have been on the market three years. The ever increasing volume of Flag sales has more than justified the confidence we had in the good opinion of a most discriminating class of the optical profession. We realized, however, that the more universal desire for 12K in Gold-Filled lines was a legitimate, bona fide and well developed demand so we did the logical thing; —we developed a Flag Line of the same excellence in 12K Gold-Filled.

The character of these Flag Lines is positively known; the element of guess and chance entirely eliminated. They are the highest accomplishment in Gold-Filled optical ware manufacture, for they represent the accumulated ability and experience of an organization older, bigger, better equipped and developed than any optical factory in the world. Naturally, the finest Gold-Filled products of such an institution are the best Gold-Filled optical goods that your money can buy.

PRICE LIST 12K FLAG LINE

Bridge and Temples 1/8 12K, other parts, 1/10 12K

	PER DOZ
Spectacle Frames	
2028 Riding	$6.50
2028C Cable	7.70
2028CC Comfort Cable	8.50
Spectacle Mountings	
2069, 2099 Riding	6.00
2069C, 2099C Cable	7.10
2069CC, 2099CC Comfort Cable	7.90
Fits-U Eyeglass Mountings, 1/8 12K Bridges	
02101, 02103, etc.	7.50
Eyeglass Frames and Mountings	
2723 Frames, offset	6.50
2793 Mountings, offset	3.75

Every single featu
finish, indicates mar
Temples and Bridges,
occurs, are reinforced w
of 12K or 14K Gold

Bridge
Eye-wire
Te

Supplementing the
special structural fe
which may be had wh

1. Perfex, pear tip, ridi
2. Smooth comfort cab
3. New small rounded
4. "T Foot" Bridge, ackn
durable in adjustm

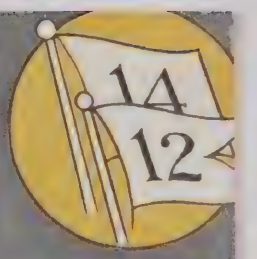
Flag Line Tr

Order Fr

No matter where y
Line Goods, through your re
but he will get them for yo



ed question *now*



the problem of selecting a line of Gold-Filled goods that you are
h this experience with most discouraging results.
of solving the problem from your view point, first making our interests
nable you to settle the gold-filled situation definitely and permanently.

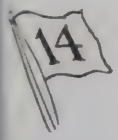
Filled SPECTACLES and EYEGLASSES

uction, stiffness, color,
ver anything offered.
hich the greatest wear
more durable covering
eight of those parts.

te of the Flag Line are
of particular mention
tably :

ed on automatic machinery.
tips.
only on solid Gold Goods.
be the strongest and most

r Protection



TODAY

K or 14K Gold-Filled Flag
have them in stock as yet

Other parts eye-wire, ends, straps, etc., are 1 10 quality.

Therefore every Flag Line frame or mounting will actually assay better than 1 10 12K or 1 10 14K Gold-Filled.

Exclusive patented processes insure an evenly tempered rigid structure, every part perfect in size and shape, every electrically soldered joint smooth and non-corrosive.

Think what goods of this kind—Flag Lines—mean in permanent good will and prestige. The best sort of an advertisement for you. Does this not therefore offer you at once a ready made answer to your Gold-Filled problems?



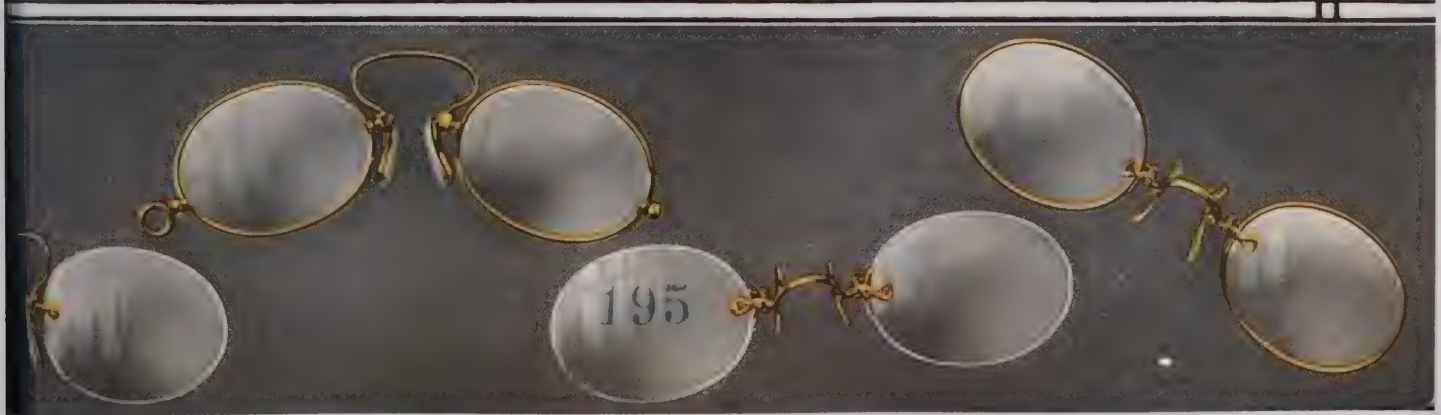
BETTER QUALITY—NO HIGHER PRICE.

Isn't it welcome news to you to know that you can now get lines of Gold-Filled goods that you can adopt as your permanent grades, better in quality, in fact, better in every way at prices no higher than you have had to pay for the ordinary kinds?

PRICE LIST 14K FLAG LINE

Bridge and Temples 1/8 14K, other parts 1/10 14K

	PER DOZ
Spectacle Frames	
1028 Riding	$8.00
1028C Cable	9.00
1028CC Comfort Cable	10.00
Spectacle Mountings	
4069, 4099 Riding	8.00
4069C, 4099C Cable	9.00
4069CC, 4099CC Comfort Cable	10.00
Fits-U Eyeglass Mountings, 1/10 14K	
1101, 1103, etc.	8.50
Eyeglass Frames and Mountings	
1723 Frames, offset	8.00
4793 Mountings, offset	4.50





Our Exclusive Lizard Grain

Much has been said about cases! The live manager of our case department says not enough can be said! We were neutral between these two points of view, so we went out to see him.



Our Exclusive Lizard-Grain

"What've you got in cases?" we asked him. "Only 50,000 dozen," he came back, with the short and quick answer characteristic of men of action. "No, I didn't mean in stock. What've you got that's *new*—not only new but good?"

"Tell you what," said he after scratching his head considerably, "there's lots that's new. But I've got a beauty new case,—lizard grain on buffing. Ought to be pushed too. Can't beat it for style!" "What else," I asked Missouri-like?

He took up a sample, studied it with the thoughtful pride of a creator, then added "It's not that it's less expensive than genuine lizard that strikes me—it's the fact that it will wear like iron, look as pretty as a picture in green and black and red, and tickle the customer's fancy. Further'n that to the customer it looks no different than genuine lizard."

"What's been done like it," I queried. "Nothing!" he returned. "We're the only people making it and believe me," he came down on the desk with a thump, "if the dealer's at all wise as I think he is, he'll get aboard on this case before others exploit it. Beautiful case—positively beautiful—only one of its kind on the market. The public's just been waiting for a pretty, hard-wearing case like that—and not a soul making it but the AOCo! The dealer's wanted a lizard grain for [illegible] that would look and wear like the genuine. Our new vulcanizing process for applying leather to steel made it possible, preserving the form and grain. Can you beat it for an opportunity? Tell our dealer friends." So there you have the story just as it was told us. Order by number from your jobber. We can make it on order in all sizes at the same prices as "J" Watergrain.

Order genuine AOCo Lizard-Grain Cases by these numbers:

Steel Form	*Aluminum Form*	*Style*	*Size*
705	706	Fingerpiece, flat top	$1\frac{7}{16}$" x $4\frac{1}{4}$"
707	708	Eyeglass	$1\frac{11}{16}$" x $4\frac{1}{4}$"
715	716	Fingerpiece, large, flat top	$1\frac{5}{8}$" x $4\frac{11}{16}$"
717	718	Eyeglass, large	$1\frac{3}{4}$" x $4\frac{5}{8}$"
325		Spectacle, flat top	$1\frac{3}{8}$" x 5"
327	328	Spectacle	$1\frac{5}{8}$" x 5"
377		Spectacle, large	$2\frac{1}{8}$" x $5\frac{1}{4}$"
367		Shooting or Goggle	$2\frac{5}{8}$" x 6"

Three Hundred Dealers Wanted This Man

No, not the really and truly flesh and blood kind but the life-like plaster model that displays your Optical goods, and never grumbles at long hours, nor asks remuneration.

So great was the demand for the American Optical Company's Model Man that we received more orders than we could promptly take care of, but you may feel safe in sending for yours as we took immediate steps to fortify ourselves against an avalanche of orders.

You know how well nigh impossible it is to make a satisfactory display of Frames and Mountings in your show windows, and surely a life-sized model offers an excellent opportunity for you to increase the attractiveness of your windows.

The American Optical Company's Model Man is a reproduction of a finely proportioned head, mounted on a decorative base, on which is a suitable receptacle for cards, nine of which are furnished to describe the various Mounts that can be displayed on the Model. It is not to be compared with the grotesque models or figures sometimes seen used for this purpose, but is truly an ornament to any Optical show window, and its beautiful bronze green base harmonizes with any color scheme you may use, and the face is so modelled that any eyeglass or spectacle looks attractive.



Send your jobber an order *now* for a Model Man, and be the first in your town to exhibit one of these window displays.

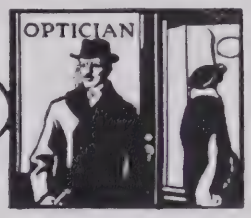
Price is seven dollars and a half ($7.50) F. O. B. Southbridge.

In ordering from your jobber be sure to state whether you wish to have it sent by express or freight. Gross shipping weight is 45 pounds.





SELLING *the* GOODS



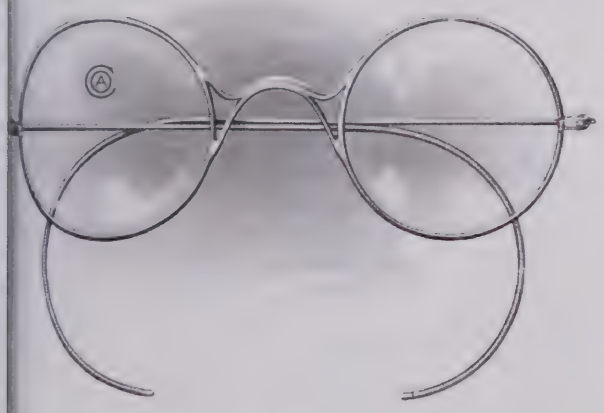
More Profit to You

Now comes news of a varsity spectacle in 1/10 K Gold-Filled that will appeal to you we feel sure. ilt in good, sturdy fashion with broad, comfort- le, reinforced Liebold style bridge strongly at- hed to heavy eye wire, its general appearance es the impression of luxurious comfort as well the distinctiveness of an exclusive style. The nples, too, are the heavy Comfort Cable type th smooth tapered junction between heavy solid re and cable and smooth tip.

The bridges are supplied in three widths. Eyes t 40 mm., round, with temples 6½ inches.

Doesn't this proposition look good to you? There a big desire on the part of your customers for st such a frame as this for library use. The fact at you can supply it in 1/10 12K Gold-Filled brings within the means of everybody, yet there is a nerous margin in it for you. All it needs is an troduction to meet with ready sale.

By the way, the catalog number of this frame is 68, the price for a dozen is $17.00. Such a frame



No. 4208

l retail readily for $5.00. Well, we guess you w a good proposition when it's put up to you.

Simply break the news to your jobber; gently *firmly* insist and make sure you get the real Co Varsity every time.

And Yet Another.

Then there's another Varsity proposition. Something "real slippery" as the office boy described it; a Zyloware non-folding Varsity eyeglass with a particularly handsome 1/10 12K Gold-Filled



No. 4817

spring. The design of the sides is worthy of the best efforts of the shell-makers' art, coupled with the knowledge of what's right in eyeglass construction. But why go into details about that? The illustration is good and it shows just how the eyeglass really looks. Let it suffice, therefore, to say that the eyes are 40 mm., and the catalog number is 4817 and the price $18.00 a dozen.

That your jobber can get these for you goes without saying. Why not join the Varsity crew and cross the line first for better 1915 business?

Why People Age!

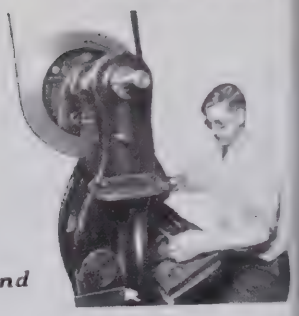
So-and-so writes: "Please send me your catalog on spectacles. I am 53 years old."

WORKS OF TASTE BEAR A PRICE

"All works of taste must bear a price in proportion to the skill, time, expense and risk attending their invention and manufacture. Those things called dear are, when justly estimated, the cheapest. They are attended with much less profit to the artist than those which everybody calls cheap. A disposition for cheapness and not for excellence of workmanship is the most frequent and certain cause of the decay and destruction of arts and manufactures."—*Ruskin.*



OUR SANIGLAS SAFETY REVIVAL



DANGER!
Unskilled aid leads to Infection, Disease, Blindness

SAFETY!
Saniglas Prevents and Protects

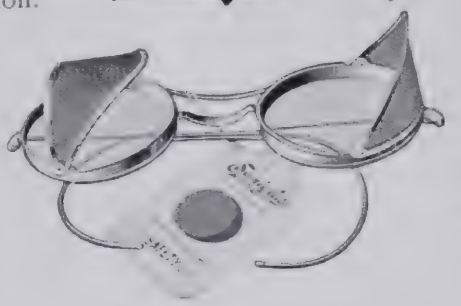
"Safety First" is a nation-wide cry! It resounds like the cry of the pack in full pursuit of the quarry. Its appeal stirs humanity to its very depths, because it means the safety of life itself. It touches the world, the nation, and the individual; it revives our most primitive instinct—the desire for self-preservation.

From the Far East to the Hopeful West, from Peary-land to the wastes of the tragic Scott, "Safety First" has been an instinct gradually working out its salvation in every conceivable form.

As a nation we lead in this idea. A vast movement from coast to coast is in full swing. "Safety First" has become the household motto. People have been awakened to the appalling loss of life, eye, and limb from gross carelessness, and the remotest individual is now keenly alive to the necessity of prevention—the anticipation of a cause before it exists—and to the possibilities in protection. SANIGLAS prevents and protects. The danger of infection and blindness from unskilled assistance is removed.

Why, then, with the world, nation, and individual in a receptive mood, is there not a field here for you with AOCo Saniglas Eye Protectors? There is. Your public is already receptive to any "Safety First" device; the call for "Safety First" has been nationalized for you. Harness Saniglas and "Safety" to make a still better slogan—then add your own personality and enthusiasm to the cry and go after the business that awaits *you!*

Saniglas
TRADE MARK REGISTERED



Big corporations have seen the value of them; why not encourage the individual workman? Make Saniglas a household word! *The safety of the family depends on the safety of the head of it.* The workman's wife is as vitally concerned as he is. Through her you may help protect him.

Saniglas lenses are tough, and if struck hard enough to break will *break outward.* For instance, they have successfully withstood over thirty-five blows from a five-eighths inch steel ball dropped twenty-one inches upon their unsupported surfaces, without breaking. Ventilated screens protect the eyes at the sides and every joint is reinforced against breakage. Experiences with Saniglas Eye Protectors in big foundries and factories show them to have broken under blows from flying chips up to forty pounds *with never an accident to the eyes behind them.* They are used exclusively by the greatest steel companies and railroads, and in all hazardous occupations.

It will be good business for you to interest the workman, the workman's wife, the foreman, the mill superintendent, and the employer in this great Saniglas Eye Protector movement. Your jobber will quote prices and make prompt deliveries. There will always be a demand for Safety Goods.

OPEN HOUSE IN SAN FRANCISCO AN INVITATION

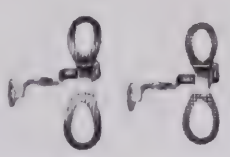
THE host of our oculist, optometric and optical friends has already started across Continent westward to the great Panama-Pacific International Exposition.

To all who may join this "Seeing America First" movement, the American Optical Company open-heartedly extends the courtesies of its San Francisco offices.

We hope and expect you will visit us there, making it the headquarters for many a delightful reunion and using its manifold conveniences, such as writing rooms, telephones, information as to accommodations, etc., for your own comfort and pleasure.

Real hospitality we extend to you with the pleasure a mutual one.

Still Another Improvement in the 3103 Fits-U



Old Style *New Style*

Contrary to the old adage, "Let well enough alone," we are always on the lookout for even the slightest chance for improvement. This, of course, has been our policy for years, and to it we attribute in a large measure the phenomenal success of the Fits-U mounting.

We now offer the popular No. 3103 Fits-U fingerpiece mounting with two quite noteworthy improvements; one is the lessening of the length of the guard, and the other the reinforcement of the guard at end to which rocking guard is attached.

The shortening of the guard greatly facilitates fitting, as well as overcomes trouble you may have experienced in finding some guards a trifle long, the upper part coming in contact with the bony structure at the base of the eyebrows. Then, too, the guard is now made with double corrugations, which adds tremendously to its security. Diminishing the size of the guard results in a less conspicuous mounting but still presents the necessary holding surface; and is much easier to fit to the majority of patients.



One can readily appreciate the value of the addition of the loop construction of guard arm through which the pin holding the rocking guard is fastened. This construction is such that there is now a bearing on both sides of the guard, and almost entirely overcomes the trouble of having loose and wobbly guards. This is a tremendous advantage, as the guards still have an easy rocking motion with absolutely no side motion—which is caused by the enlargement of the hole in the guards resulting in their finally becoming detached.

Thus the employment of this double bearing construction does much to prevent a common occurrence that of patients coming in with the complaint that their glasses shake on the nose.

Give your jobber an order for some of these mountings and see whether you do not agree with us that they are more than ordinary improvements in eyeglass construction. In no way is the cost of the No. 3103 Fits-U affected. It can be obtained from your jobber at regular Fits-U prices.

Odd Tribute to Fits-U Quality

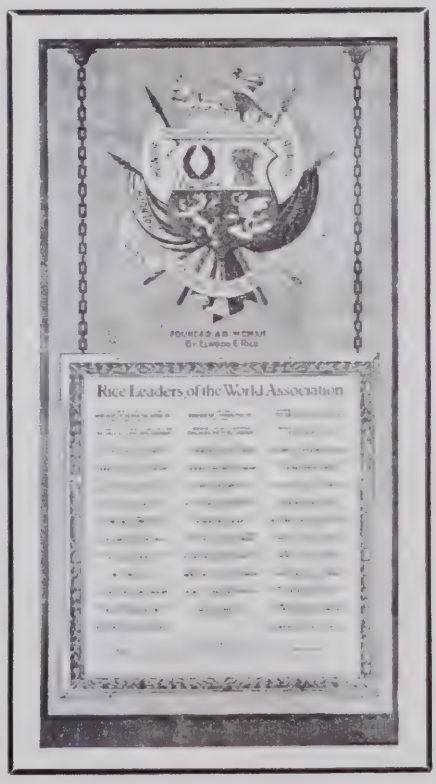
In a mysterious suicide which has recently been given many columns of space in the Chicago papers, an odd and entirely unconscious tribute was paid to the quality of Fits-U Eyeglasses. The Chicago *Tribune* in giving up a front page column to describing the various clues says:—

"While most of the victim's jewelry was inexpensive he had eyeglasses of good quality . . . The eyeglasses are rimless and the trade-mark 'Fits-U' appears on the nosepiece."

On the Eighth Lap

Nearly one year! Eight months gone since the Rice Leaders contests started! "They're off!" cried the crowd. Day by day, month by month all eyes were trained on AOCo, all glasses watching the field streaming out behind. Oculists, optometrists, and opticians down to the most impassive eyeglass-wearing spectator in the grandstand stood tense with the expectancy of the moment. Not a sound as they raced 'round the international track. Far down the turn they swing into the stretch and race past the eighth lap. AOCo never falters. "She leads—AOCo leads!" the multitude roar as they flash by the stand and disappear round the bend.

Truly it may be remarked that the sun never sets on the Leaders of the World banner, for there are contestants for prizes in every civilized country. Thousands are entering the race, for the stakes are worthy of the game.



These great contests offer you a chance to win a share of the $15,000 cash prize for Window Displays. The Association also stands ready to divide $10,000 among those in the grandstand for ideas that will keep the AOCo in the lead.

The contests end in May; nearly five months to go. Get into this race now with your ideas, window displays, and enthusiasm. You will be bound to win in increased sales and profits whether or not you are lucky enough to be a prize winner.

Here's what Benjamin F. Vander Zanden—who tried it and knows—writes in from De Pere, Wisconsin, to the Rice Leaders of the World Association:

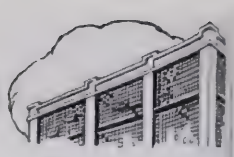
"Gentlemen:

We found that the Window Display of American Optical Company goods materially increased sales, and most people coming in for glasses,called for, or in some way mentioned Fits-U.

The Rice Leaders Banner was displayed at one end of the window and was a big help in increasing our sales, and added much prestige to the goods displayed.

A good many people already knew what the Banner stood for through having seen your advertisements."

Write to the Rice Leaders of the World Association, 358 5th Avenue, New York City, for full particulars.



A PILGRIMAGE

From Southbridge to Amherst to see the Tinker Genius

We found "Uncle Eddie" Thompson, tinker genius, friend of the late Alvan Clark, Brashear, and assistant to Prof. Todd on astronomical expeditions to Japan, Tripoli, and South America, seated in his little shop, hidden behind the National Bank in Amherst. Seventy years old, a genius at any job from lens grinding to making friends, counsellor and teacher to scientists and professors, and honorary Master of Science of Amherst College, he was sitting there fixing a leaded-glass window at 9 o'clock on a Saturday night.



Student tradition in Amherst College credits "Uncle Eddie" with the ability to do anything. It doesn't matter whether it's the simple problem of a bed-spring or a complicated problem in optics, he can solve it. Few know more about astronomical optics on its mechanical side than he. Professors in Amherst give him their ideas and he works them out. He has invented, made and set up various parts of telescopes now in successful use. Yet no one can lure him from his obscure location behind the bank with the inducement, or hope, of publicity. He's no seeker after fame—it has come unsolicited from his works and the whisperings of a host of students who've carried his name far and wide, until Ray Stannard Baker heard it and inscribed it in the *American Magazine*.

Hunched up cross-legged on a rickety stool, putty knife to mouth and a chipper, bird-like expression 'round the alert eyes, the reminiscences began on the subject of the late Alvan Clark, the great Cambridge lens maker. "Last time I saw Clark he was workin' on the Lick telescope lens. How large? 'Bout, let's see, 36 inches. Clark was never satisfied with a perfect figger. He allus said no matter how perfect the glass wuz, he was goin' over it—and sure 'nough he did. The lens 'd have a perfect curve but he'd get down t'one end of a long black square tube, set up the lens, poke a candle up front of it, n' watch th' image of the light refracted on the charted squares down t'other end; if the image spread or blurred he'd plot out the correction. There'd be 250 corrections to make on what you or I might call a perfect lens, both sides, afore he'd get through. Took him three weeks maybe to correct one little part on that lens. Yes, siree, perfect glass would fix that now, but Clark'd still insist on correctin' it. There wan't no such thing as perfect glass to Clark. Trouble with *Brashear 'n them fellers today, they don't take any such pains; they grind a lens to the perfect curve 'n let it go at that."

Then, "Uncle Eddie" got to talking about his glasses—and best of all, unconsciously handed us a testimonial along with some shrewd comment on buying glasses. We had told him about our latest Uni-Bifocal lenses, when he said he was bothered by his cemented bifocals. "They get in my way, these uns I wear. Never needed glasses 'till I was fifty." We could see no defect as it was in those kindly, keen eyes. "Done fine work all my life and *don't believe in sparin' expense on glasses*. Every time they bother me I go get 'em changed. I'm goin' to change these; those new one-piece double lens (Uni-Bifocals) are just what I want. No! siree! 'don't believe in hedgin' on expense; it don't pay. I'll go right over tomorrow and get 'em from Millett—he sells your goods."

We offered to send "Uncle Eddie" a pocket reading glass as a simple token of appreciation upon leaving. He grabbed one of us softly by the lapels: "No, sonny, just send me a catalog of your goods," and that's "Uncle Eddie" in a nutshell—as simple in tastes as before his measure of fame came to him, kindly in spirit and contented with his lot, he lives out his life in the humble satisfaction of service to others and consciousness of work rewarded. But if you think 70 years means old age, try to fool "Uncle Eddie"! Watch him hunch his shoulders, give that alert bird-like twist of the head, shift quickly about, and turn those keen eyes sparkling with years of accurate thinking and observation on you. Then he's after you! We knew better than to try it.

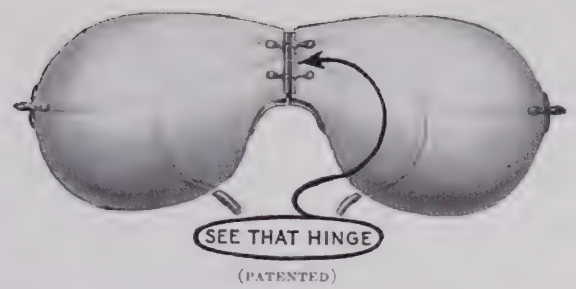
As we left him he started back to rickety stool, putty knife and old leaded-glass window; 'twas then two hours from Sunday.

*Dr. John A. Brashear of Pittsburgh was elected President of the American Society of Mechanical Engineers at its annual convention in the Engineering Societies Building, 29 W 39th St., New York, on December 3rd. With the late Alvan Clark, Dr. Brashear shared and still shares the reputation of being the foremost telescope lens-maker in the world.



Amoptico

NO OPTICAL STOCK
IS COMPLETE
WITHOUT
THE AUTOGLAS
(Patented May 2, 1911)



(PATENTED)

WE RECOMMEND
THE BEST EYE
PROTECTOR MADE
THE AUTOGLAS
Trade Mark, reg. U.S., Pat. Off.

The AUTOGLAS, as illustrated above, is the only hinged bridge Eye Protector made, s this is a patented feature that cannot be used except in the AUTOGLAS.

This hinge, combined with the shape in which the lenses are ground, permits the UTOGLAS to fit every curve of the face, absolutely excluding dust and flying particles ut at the same time allowing full ventilation for the eyes from the sides.

The AUTOGLAS is made in four sizes, and cardboard sizers may be had for the asking.

Regularly supplied with standard Amber Lenses, but may be procured with white, or ny color desired, at a slight additional cost.

Retail price, with standard Amber Lenses, each $5.00. Write your jobber for articulars.

BETTER THINGS

Sound the trumpet!
Beat the drum!
Better things are
Bound to come!

– C. & H.

A MILLON-A-YEAR

st as a reminder how we are helping your business, the year ended has shown a distribution of 1,000,000 blotters to the

High Speed Steel Screw Taps

he past half-century has seen tremendous strides e art of cutting metal. The greatest advance- t of all has been in the perfecting of steel for e use of cutting tools. This new steel is rightly d "High Speed Steel" (on account 's remarkably free and rapid cutting ities, and its ability to stand a maxi- of speed with its consequent abuses). he American Optical Company was ly awake to the possibilities of such el when applied with small taps and s, for Optical purposes, particularly w taps. Of such an infinite size it is rative that they should be of a material that d stand sufficient hardness to maintain a sharp ting edge without destroying their flexibility that essential in such small cutting tools.



AOCo Screw Taps not only have these qualities, that tend to increase the usefulness and long life of a tool, but are furnished today with grooves or flutes which serve as a means of egress for the small chips of metal which are removed.

Fluting the sides not only makes cutting easier and quicker, but provides a much cleaner and better thread. The old style of Screw Tap, with flat sides, always offered an opportunity for the chips to clog, and often resulted in the breaking of the Tap.

With the Fluted type ample clearance is provided for the chips to work back and out which, as one can readily see, is very essential for perfect tapping.

The next time you order Screw Taps do not merely order Taps from your jobber, but insist on "AOCo Screw Taps."

What Do You Know About This?
And You Let Him Do It!
The Uplift of the Movies!

Gentlemen:

All of the lantern slides are fine and the one that states that "If The Pictures Hurt Your Eyes It's Your Eyes And Not The Pictures" *was so liked by the owner of the show that he wants to run it all the time free of cost to me* so I let him do that and furnish him another one to run every evening, so with your permission I will retain that one until he gets thru with it.

Try and not let me run out of all the printed matter you can send me.

Yours for business,

(Signed) James R. Rigg.

Amoptico

Our Inveterate Reader

We have an idea which, accompanied by proper orchestration and the rendition of mellifluous melody by the anvil chorus, we would like to place before you. We speak feelingly of our latest Amoptiscopes, the new Shell and Mottled Amber colored readers conceived, nurtured and now cut off to shift for themselves in Southbridge, Mass., and other parts.

We have had other ideas too in the last thirty days. Those that survived are in this issue. Those that haven't died a variety of deaths: some were put to death by processes known only to Catherine de Medici and us. Others were cut off abruptly at the neck. This one today is as full of feeling as the Frenchman when he raises fingers to mouth and kisses them open, fervently murmuring "Magnifique."

They represent merely a change in color from virgin white to a beautiful deep mahogany shell, and a soft yellow, translucent mottled amber. Only a short step from one color to another but quite adaptable to human tastes. In the winter one likes a rich, thoughtful shade; or the soft mellow appeal of amber is wanted. In the summer nature is colorful; we then want white, ivory, the cool, the refreshing tones in our library readers.

And Amoptiscopes are indispensable; they are as inveterate as the readers who use them. No library table is complete without one, few are ever seen unadorned with one and you yourself will find it difficult to remember the time when the old library table did not have one handy, next to the Bible, for the old folks to use. There is always, therefore, a chance for you by suggestion to encourage the customer to purchase one. If he owns a light table—oak, maple, or walnut, suggest the mottled amber. If a dark or mahogany table, the dark shell is an admirable companion. But whatever the particular uses of these two new colors AOCo Zyloware Amoptiscopes, for general necessity and pleasure are artistic, useful articles with powerful lenses.



Mottled Amber

Cat. No.	*Focus*	*Diameter*	*Ivory, or Dark Shell Per doz.*	*Mottled Amber Per doz.*
R5952	+10.	2 inch.	$11.25	$12.00
R5952½	+8.	2½ "	15.00	16.25
R5953	+6.50	3 "	18.00	19.50

AT LAST!
Four New Business-Getters

And When They See Them In Color!!!!$$$$



Now then! We have prepared these four beautifully designed window cards for you to display in your windows, calling attention to your profession and its various branches. Cards are 6 x 9, printed in red and green on a delicate pearl grey stock, producing a most pleasing combination of colors with an attractiveness that will catch the eye of the public in passing your window.

No. 17D4.

The most appropriate copy has been used for these cards and when printed in a brilliant shade of red your prospective customer can't fail to go away from your window without having firmly impressed upon his mind the thought that you do scientific eye testing or pay particular attention to children's eyes.

Then, too, these cards tend to link your store and its product with the American Optical Company and the Rice Leaders of the World, both of which are so widely advertised in the national magazines.

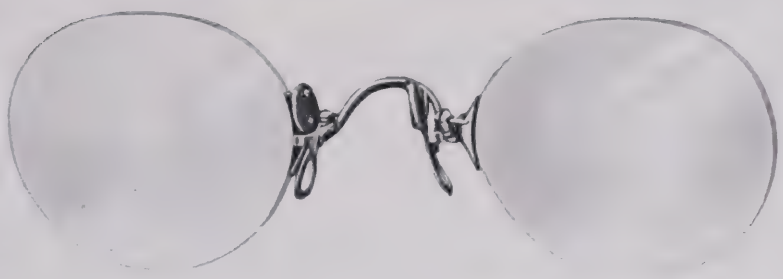
Owing to the expense incident to preparing these beautiful cards and the careful packing necessary, we ask you to send us *twelve* cents in stamps to help defray the cost of packing and mailing.

While we have a liberal supply we urge you to send in your request, together with stamps, at once and avoid being disappointed. The order number of the set is No. 17D4.

Write the Publicity Department for Booklet A showing various quality and trade marks. This will assure you of your always obtaining AOCo quality goods.

"The eye of the Master does more work than both of his hands."—*Ben. Franklin.*

THE FIRMSETT POSITION



You've never had trouble re Firmsett mountings re put on the market. Nowadays you can take ens, *without holes or rms*, grind its apex to a arp and true point, and t one of five widths of e Firmsett lens box, apply ur mounting with the aid Firmsett cement, and presto! 'tis done. Just ordinary care kes the mounting of the Firmsett simplicity itself.

Obviously, the first thing is to select a lens box or Firmsett ap to fit the apex of the lens to be mounted. The lens box st be clear and free from grease. These Firmsett straps are de in three widths in ¼ mm. steps (1½, 1¾, and 2 mm.) to mmodate both flat and toric shapes.



With materials at hand it is therefore the work moment to heat the strap and lens and cover lining of the box with the cement. When the ent is soft, press lens and strap together, and e finished. Firmsett cement is not soluble in r, but is soluble in alcohol, so that care must d in cleaning the lens afterwards lest the ol run under the strap and soften and destroy efficiency of the cement. No effort should be to change a lens after it is once in place; aks the cement.

these considerations—ease, durability, no , freedom from breakage, a wider range of vision possible gh the use of a smaller mounting and larger lens—contribute aking bigger business factors for you; viz., the satisfaction time-and-labor-saving device, the gratification of customers, the opportunity for comfortable profits.

e best of it is that results justify the name given to it. Its is established by its present widespread use after three years on the market. What better test is there than time and the fact that the AOCo stands behind it? It has finally convinced us—and we were frankly skeptical three years ago—of its utility and practicability; so thoroughly that we have predicted a permanent stay for it.

You can get AOCo Firmsetts from your jobber. Ask him.

10K SOLID GOLD		*Per Dozen*
798	⅛ Mountings	$38.00
798	⅛ Bridges, complete	14.00
798	⅛ T & End, Complete	24.00
798½	T & End, Complete	30.00
798½C	T & End, Complete	34.00
798½CC	T & End, Complete	36.00
798	⅛ Bridges, 3611 Pads	17.50
798	⅛ Endpieces	15.50
893	Mountings	24.00
893	A. or B. Box Studs	15.50
893	C. Box Studs	16.50
893	Ao or Bo Studs	17.50
893	Co Studs	18.50
03112	Fits-U Ovalex Mountings	24.00
1/10 12K GOLD FILLED		
1669	Mountings	$15.00
1669	Bridges, Complete	6.75
1669	Endpieces	7.00
1669	Temples and Endpieces	8.70
1669C	" " "	10.00
1669CC	" " "	11.50
3611	Bridges, 10K Pads	11.50
1793	Mountings	12.50
1793A	Box Studs	10.00
1793B	Box Studs	10.00
1793C	Box Studs	10.00
1793	Ao Box Studs	10.00
1793	Bo Box Studs	10.00
1793	Co Box Studs	10.50
03112	Fits-U Ovalex	12.50

PUNKTAL LENSES

No doubt you have heard of these wonderful new ophthalmic lenses about which so many articles have appeared recently in optometric trade journals.

PUNKTAL LENSES are of the deep curved (meniscus or toric) form whose curves have been so computed that the lenses are equally well corrected from their centers to their very margins in all powers, eliminating all astigmatism of oblique pencils of light so noticeable in the strong and moderately strong dioptral numbers of regular lenses.

THE AMERICAN OPTICAL COMPANY is prepared to accept orders for and supply

PUNKTAL LENSES

THROUGH THE REGULAR JOBBING TRADE

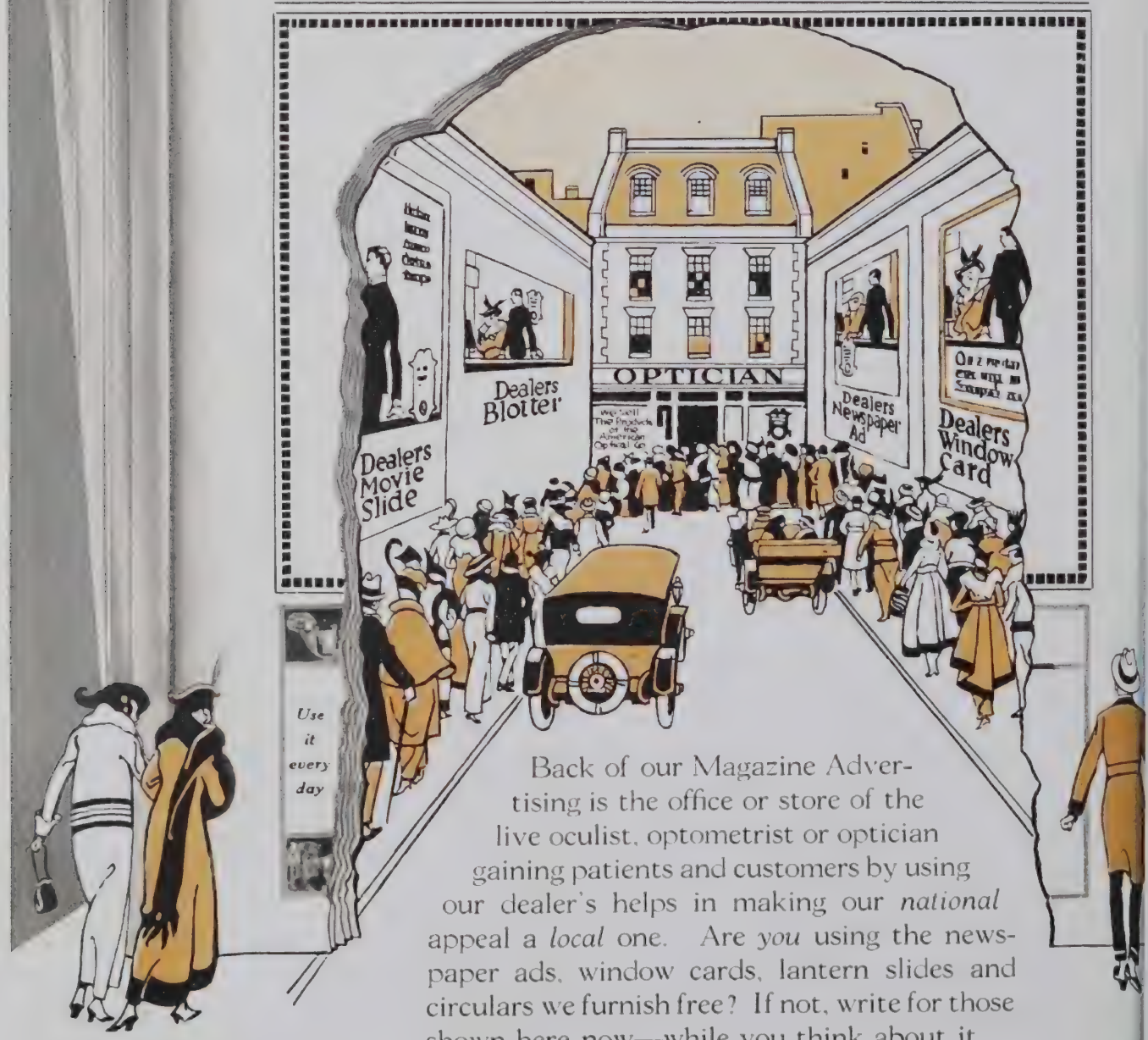


"Yes, madam, these are American Optical Company Toric Lenses.

I am glad you spoke of it. So few people are careful enough about lenses. Yet nothing is more important in buying glasses. The American Optical Company has been making glasses for eighty years. It is the oldest optical manufacturing company in America and the largest in the world. We find their lenses the most reliable we can buy."

Ask *your* oculist, optometrist or optician—he knows.

AMERICAN OPTICAL COMPANY
Southbridge Massachusetts

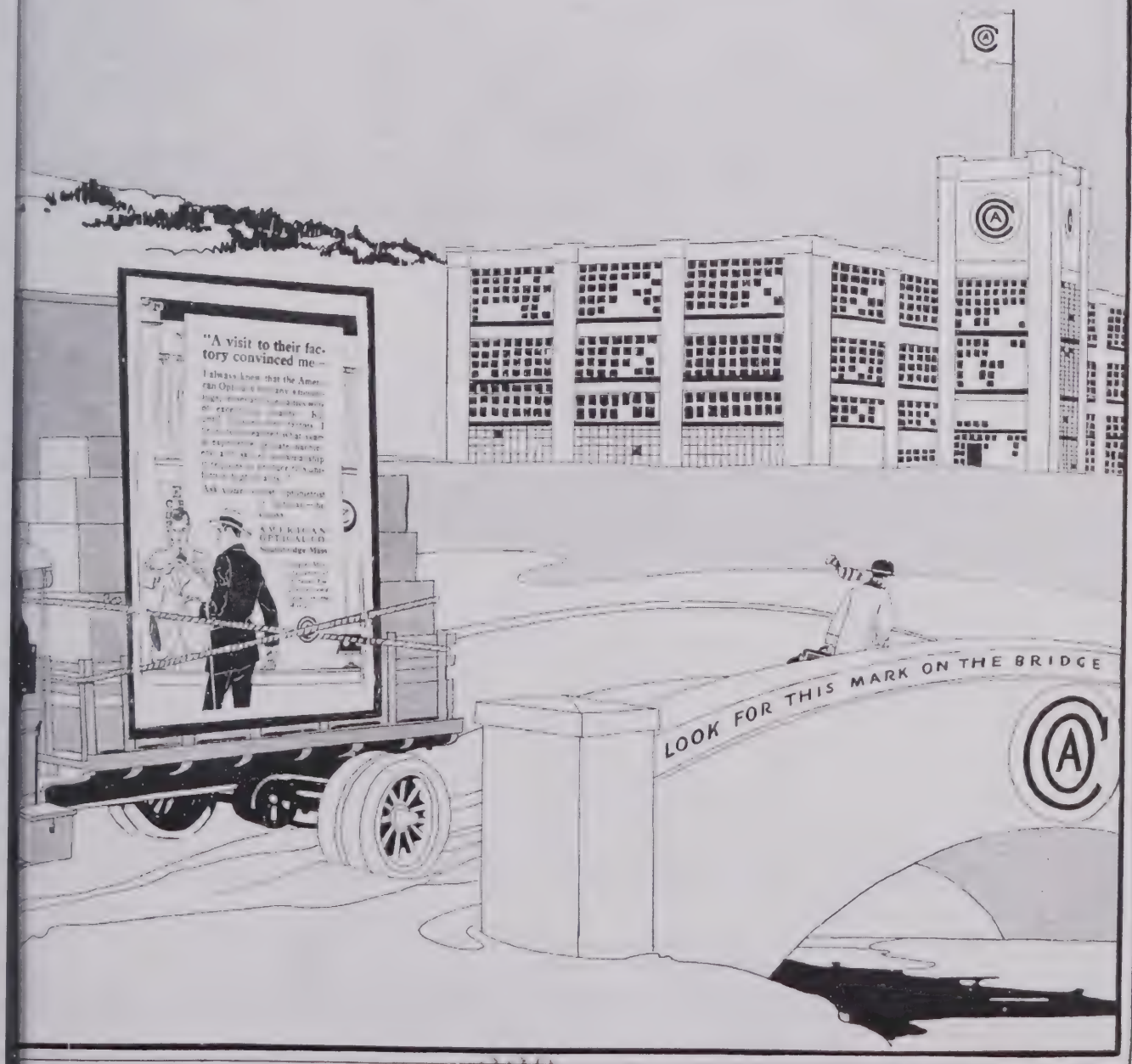


Back of our Magazine Advertising is the office or store of the live oculist, optometrist or optician gaining patients and customers by using our dealer's helps in making our *national* appeal a *local* one. Are *you* using the newspaper ads, window cards, lantern slides and circulars we furnish free? If not, write for those shown here now—while you think about it.

Amoptico

Published by the American Optical Company
at Southbridge Massachusetts

ol 3 March, 1915 No. XII



Noviol *The New American Colored Glass*

AFTER years of unsuccessful attempts by American manufacturers to produce a scientific colored glass the Coming Glass Works has produced NOVIOL.

We immediately recognized this as an epoch making improvement and secured rights on this glass, realizing its immense value to the trade.

Unique Among Colored Glasses

We now take pleasure in introducing Noviol to you as the Pioneer of scientific colored glasses in this country. It is a product of American brains and initiative in the face of great obstacles.

Changes Ultra-Violet to Light

Noviol possesses a quality that no other commercial colored glass extant presents. It not only cuts out the harmful ultra-violet rays entirely, but changes them to light, making the visible spectrum wonderfully clearer, *increasing vision.*

This can be said of no other glasses, which merely change the ultra-violet rays to heat rays. It will be the shooting and auto glass of the future.

Enhances Vision

Compared with others this American glass is clear and sparkling like running water. It has no muddy, unsightly color, such as prevents the transmission of the visible spectrum through other lenses. Noviol lets through the visible colors more brilliantly.

It absorbs a greater percentage of the harmful heat rays than any of the others now on the market.

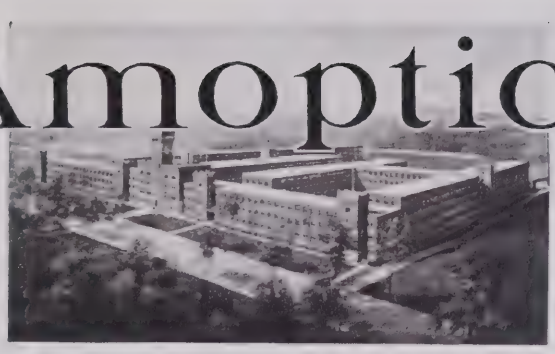
The Shooting and Automobile Glass of the Future

With these predominant features and our unexcelled mechanical and advertising facilities you should not fail to put Noviol in your stock of colored glasses. On another page of this issue is a fuller description of this native American made product. We are now ready to fill all orders immediately.

"Because It's the Best You Can Command the Best Prices."

Amoptico











Colored and Tinted Glasses

Extracts from Lecture by H. T. Reeve, Metallurgist and Physicist of the American Optical Company

THE wearing of glasses, especially colored glasses, until comparatively recent years, was a privilege left open with a certain amount of contempt to the scientist. However, people gradually became educated to the fact that somehow it really did improve their sight to wear glasses with a focus; finally even children had to wear glasses to correct the errors of their eyes. We owe it largely to the profession that this is so and that under their constant demand a vast and increasing business has grown up to supply the needs of innumerable patients.

Why Wear Colored Glasses?

Now, the business of prescribing glasses for the eyes belongs to the oculist and optometrist, and his demands for better and more perfect glasses have increased and are becoming more insistent every day, and this is rightly so, for what is more important to our physical well being than perfect sight? Hitherto we have in a general way used colored glasses without any real scientific reason as to why we wore them. What benefits did we derive from them? And why were they sometimes so restful to look through? It was certainly conceded that certain colors gave great relief to "sore eyes," and it is just the real meaning of and remedy for so-called "sore eyes" that I want to drive home to you. It can and will be shown what causes some "sore eyes" and also the best remedies to use in these new glasses.



H. T. REEVE

Born 1886. Educated at the University of Birmingham, England. Specialized in metallurgy and electro-chemistry. Took the Associateship of the Institute of Chemistry of Great Britain and Ireland (A. I. C.). In 1909 joined the Staff of the National Physical Laboratory, England; three years doing analytical and research work. Joined the Scientific Department of the AOCo in 1912 and now the chief Metallurgist and Physicist. Elected to the Fellowship of the Institute of Chemistry in 1912 (F. I. C.).

Colored Glasses Chosen By Sentiment.

First, however, we will briefly review the history of colored glass; several centuries ago, green glasses were worn. Why were they worn? Is it not a fact that the green fields and trees are pleasant and restful to look upon? Therefore it must have been argued that green glasses would be equally good—so they were. However, things come and go by fashion and glasses were no exception to the rule.

Blue ones—the same color as the sky—were pretty, easy to make, so they were worn; but they evidently had a brief popularity for they were not restful.

Next came gray, or neutral or smoke colored glasses, similar to the grey clouds which are so effective in reducing the light from the sun. These have had a great popularity and are still worn to a considerable extent.

Thus far we had three glasses, green was generally restful, blue reduced the glare and heat from furnaces and was generally used for that purpose, and smoke allowed people to see natural colors unaltered and reduced the glare from too strong a light. Also red glass was used in photographic dark rooms to



prevent the action of light on the plates.

The next step forward was taken when it was noticed that all windows exposed to a north light gradually turned an amethyst tint. Hence glasses were made in different shades of amethyst and strongly recommended for all. This led up to an interesting question. What caused this window glass to change its color? Was it light in general or was it certain portions of light? At this point it must be explained what is meant by light in general and colored light in particular.

What Is Light?

Light is a form of motion originating from a source of disturbance and requiring a medium which we vaguely call the aether to carry that motion. It carries this motion in a succession of waves. If you imagine a still pond and drop a pebble on it you get the well-known ripples. The distance from the crest of one ripple to the crest of another is called a wave length. These waves have many similarities to light waves. Visible light is propagated from the sun as a centre of disturbance through the aether in a succession of minute waves ranging in wave lengths from 33 millionths of an inch to 15 millionths of an inch. In other words the colors of light are like the tones of sound—due to difference in wave lengths. It must not be forgotten that by wave lengths we mean the distance from the crest of one wave to the crest of the next.

Analysis of Light Shows Colors: The Spectrum.

Having now seen what light is, let us go on a step further and analyze light and see if it is not capable of being shown to be a mixture. This, of course, is done naturally when the sun shines through rain; it is then refracted up into the sky and analyzed or sorted out into the colors that it is composed of. This is due to the fact that the different wave lengths with their varying frequency are all bent at different angles and hence sorted out.

Newton was the first to reproduce this natural phenomenon artificially. In his classic experiments he allowed sunlight to stream through a narrow hole in a shutter of a dark room and thence through a glass prism producing on a screen the well-known colors which we now call a spectrum. His method of demonstrating a spectrum has since been improved upon greatly by using an artificial source of light and a narrow slit instead of a round hole, and the prism he used was probably a very poor surface while our prisms now, with our splendid facilities for grinding and polishing are made with a fine surface and therefore give a very beautiful spectrum.

SPECTRUM

Invisible	Visible						Invisible
Ultra-Violet Actinic Rays (Harmful)	Violet	Blue	Green	Yellow	Red	Rays	Infra-Red (Heat) Rays (Harmful)

Wave Lengths Determine Color Sensation.

We have, therefore, so to speak, analyzed the light and shown that it is not a simple substance but a mixture of all these different wave lengths or colors. The so-called red waves are long ones, that is long, comparatively speaking, being about 33 millionths of an inch; the violet are the shortest, being around 15 millionths of an inch, while the other colors, yellow, green and blue are intermediate. These different wave lengths have the power of producing different sensations in the eye and these sensations are conveyed by the nerves to the brain.

When we say then that an object is colored, we merely mean that it is absorbing certain wave lengths and reflecting others. For instance a piece of red cloth is absorbing the violet, blue and green and perhaps some of the yellow and reflecting back through the eye the red and orange waves.

Spectrum Analysis—Visible and Invisible Rays.

Now in this spectrum, besides the visible light there is invisible light, but you may argue that if the light is not visible then it is not light at all, but it *is* light in the sense that it can be reflected and refracted and polarized and also it can be seen, so to speak, with other eyes; that is, a photographic plate can see it and it will act more strongly on a photographic plate than the light that we can see. Further than that, we know the effect of certain rays, although we cannot see them; for instance, what is heat? We feel the effect of heat on our body although we cannot see the waves that are producing the heat. There are heat waves in that spectrum although you cannot see them or feel them because they are so minute and few, but if you hold a very, very delicate thermometer capable of detecting minute quantities of heat, that thermometer is affected and it has been proved that in this way these heat waves stretch out some considerable distance beyond the red end of the spectrum. The other name of these invisible heat rays is infra-red waves. Now to complete our analysis of the light,

let us see what there is at the violet end. There are means of showing visibly the so-called ultra-violet waves and the other names of these are chemical rays because they act on photographic plates.

Fluorescence

There are many chemical substances which, when these waves fall upon them, have the property of shining, or fluorescing as it is called, and notable amongst these chemical substances is quinine -and better still anthracene. A piece of cardboard painted over with anthracene and put next to the violet end shines with a greenish light. You are not thereby seeing the ultra-violet waves but you are seeing their effect on the anthracene. In short, the anthracene is transforming these very short ultra-violet rays into longer waves that are capable of acting on the nerves of the eye.

Invisible (Infra-Red and Ultra-Violet) Rays; and the Visible Rays.

We have now completely analyzed our light into the following: heat rays which are invisible, red rays, yellow, green, blue, violet, and ultra-violet.

Ultra-Violet Turned Windows Amethyst.

Now let us turn back to our window pane, which turned amethyst and see which of these kinds of light was responsible for the change in the color of the window. We find that it was the ultra-violet waves that caused the change. A great deal of work has been done with these ultra-violet waves and their properties have now been studied very thoroughly. A piece of glass from a moving picture lantern which has been exposed to a light that was rich in ultra-violet rays shows that the glass has turned a light amber color. Different kinds of glass may act in different ways with this ultra-violet light: some turn amethyst, while others turn amber according to the chemical composition of the glass. They also have a bleaching and discoloring effect on various organic substances, also they will destroy bacteria and thereby sterilize food: finally their effect on the human organism has been studied and this is the chief matter that interests us.

Snow Blindness –Electric Ophthalmia.

We know that people travelling around on snow fields exposed to bright light suffer from so-called snow blindness. Others suffer from what is called electric ophthalmia. Ophthalmia in general is an irritation of the mucous membranes of the eye. If it may be caused by bright electric lights, such as often happens to people who are constantly handling them, it is called electric ophthalmia, and this is the real scientific name for the majority of sore eye troubles today.

Experiments On Animals and Man.

Now by experiments on animals and the human eyes, too, it has been proved beyond a doubt that this electric ophthalmia is entirely due to the ultra-violet rays given off by electric light. Another thing that has been proved is that with the increasing use of electric light and the higher and higher power of the light this electric ophthalmia and subsequent operations for cataracts have been on the increase. Hence the demands for a means of counteracting the evils caused by the increasing use of the electric light. We see now the strong need for some kind of glass for counteracting these rays and now, let us follow the advance of colored glass and see what steps have been taken to meet the needs.



Crookes Light Shade *Ordinary White Glass* *Crookes Dark Shade*

When Science Took Hold—Results.

In 1887, Dr. Fieuzal, a German Scientist, produced the well-known glass which bears his name. This is a greenish yellow glass designed to cut down the glare or excessive intensity of light, as well as some of the ultra-violet rays; also somebody proposed that amber was a good color for this purpose and performed pretty well the same deeds as the Fieuzal. The Germans went still more and more into this subject and produced still another glass than Fieuzal called Euphos and this glass provided a means of absolutely removing all the ultra-violet rays and only cutting down the illumination to a small extent. Now the trouble with these glasses was that many people considered them unsightly, so that the demand arose for a glass that would eliminate the

ultra-violet rays as the Fieuzal and Euphos and at the same time be fairly decent looking to wear. In 1909 the Cataract Committee of the Royal Society of London, England, invited Sir William Crookes to investigate the large and increasing number of cases of cataracts among glass smelters. Sir William agreed to take up the subject and very thoroughly indeed investigated all the causes and effects and worked four years endeavoring to produce the right remedies.

Sir William Crookes Glass.

First of all he studied what kind of rays were given off from glass smelting furnaces and he found the trouble to be due to heat rays. You have all probably heard how the old Arabs when they visited the tomb of Mahomet swore that they would never look at anything else and then they heated up bricks as much as they could and then held their eyes closely in front of them to be led away blind.



Crookes and X-Rays.

Sir William Crookes, therefore, decided to try and find a glass that would not stop off too much light, but would cut off the injurious heat rays. However, being interested in this subject he decided to enlarge this research and include a glass if possible that would cut out ultra-violet rays as well. For the benefit of those not familiar with Sir William Crookes, it should be mentioned that he has done a lot of work in the so-called Crookes tube. This tube is a vacuum tube through which an electric current is passed producing certain kinds of rays. These rays are known as electric rays and the knowledge of their properties afterwards enabled Roentgen to discover the so-called Roentgen rays, or X-Rays, which are being turned to so great a benefit to mankind in general. Sir William Crookes, therefore, may be looked upon as predecessor of the discoverer of X-Rays and his knowledge of rays in general made him an ideal man to take up this work.

The properties he desired were:

1. That the glass should exclude as much as possible the ultra-violet rays.

2. To exclude as much as possible the heat rays.

3. To interfere with the visible portion of the spectrum as little as possible.

If any one glass contained all of these desirable properties it would be ideal, but unfortunately in spite of all the work that has been done on this subject no glass has yet been made which conforms to these specifications. Sir William Crookes first of all made up a clear and colorless glass which served as a basis and then incorporated with this clear basis various forms of metallic oxide, both common and rare. He then tested out the product in a scientific way and measured their properties very accurately and in this way he was enabled to discover that certain metals were worth experimenting with while others held out but little hope. In this way he reduced the number of metals and oxides to incorporate with the clear basis to about 12 and of course, the number of combinations that one could obtain with these 12 is vast. Altogether Sir William Crookes made up over 300 different mixtures and tested out all the optical properties of these glasses very thoroughly. You can see at once the enormous amount of work entailed and it is no wonder that such a research took four years to complete. Out of these 300 different mixtures came Crookes glass in two shades whose great properties are already too well-known to need further comment.

Distinction Between Colored and Tinted Glasses.

Now it is essential to draw a distinction between colored glasses and tinted glasses. A *tinted* glass is one which has just a faint perceptible color, but not enough to alter the colors of objects when looking through the glass. A *colored* glass, on the other hand has a more or less pronounced color and the effect

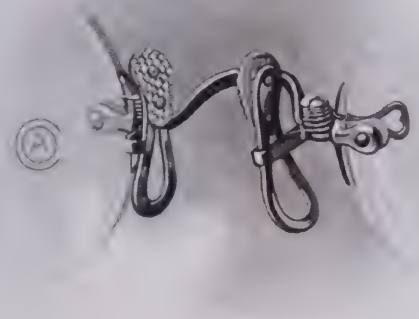
(*Concluded on page 18.*)

California Sends Its Most Popular Idol Eastward

TIPTOE softly over here and see what we've got! See its little sharky self—a real denizen from the Pacific's watery waters.

Now a man whom we'll call Jones—because that's his name—got real chummy at one of the California jumping-off places with a school of these friendly natators. He discovered they carried grips, even after death, like the proverbial bull dog. Upon rising from his bed, thereafter, he decided to hang a grip like that on somebody else's nose. So he picked his recruits from this particular A. Sharkskin Grip No. 1 school and being a New Yorker he chose them particularly for their nasal resemblance to some of the folks back home. And they justified his expectations. Biologists tell us this about noses: that we were originally fish and crawled on to land in Palestine. The whole body changed from fins to flippers, clippers to hands, etc., but the nose survived and migrated from Palestine to New York.

The Commodore of the fleet—you can tell him by the AOCo on his fin—thought Jones' idea was great; notice him smiling. He vowed then and there he'd hang on to any nose longer than the folks East could hang on to a dollar. So the Commodore proved he could. To date he's ahead. They say no matter how you try—and he doesn't hurt you—you can't even shake him off after death.



Of course this ensures the mounting a long life, far beyond the normal duration of most fittings.

Well then, we got wind of it! California is a little advertiser—it seldom sleeps, but even when it does it keeps on registering its subconscious self in favor of California. We know all about him—how he was tamed and trained to wear the AOCo monogram, was mounted with a strong, injury-proof guard designed for a solid comfort grip, and so on. They told us his sharkskin had been specially prepared for noses in the East, middle West, and South, attached to the bearing pads. Well, all the Pacific coast people flocked in to buy. They knew it was just what the Commodore'd promised Jones—the



strongest grip with the lightest spring pressure on the market, atop a firm and comfortable guard.

Now it's up to the rest of the trade to arrive in as dignified a manner as possible at this belated hour, for their own benefit. Don't crowd.

Have you ever tried this mounting? Have you noted the grip of the sharkskin pads without pinch? How minute the teeth are constructed so as to run against the pull of the guards and yet not dig into the nose? If you haven't words cannot make you feel the indescribable comfort that these never-come-off pads bring to the wearer.

The sharkskin grain used is rough but only the fine grain is selected, taken from the belly side of the fish where the skin teeth are very small. By special processes of curing and manufacturing the bite is removed; the teeth and the skin are made available for a lifetime of hard and fast wear without the slightest discomfort.

Sharkgrip mountings with skarkskin pads are sold at $1.50 increase over our regular Fits-U's. They are well worth it, too! The saving in a once-on-always-on mounting, and in annoyance far exceeds their nominal value. Why the Sharkskin Grip mounting has not been called to your customer's attention long before this is one of the mysteries of the day! One trial would indicate that to you—one inspection of it. There is nothing—positively nothing—even as good, or better, on the market.

Coast dealers are planning to carry the Panama-Pacific Exposition by storm with it. Several of the largest optical houses in the country have adopted it as their regular mounting. Where are you?

Sharkgrip Mounting, with sharkskin pads:—

1/10 12K Gold filled	per doz. $8.50
10K Gold	" " 18.00

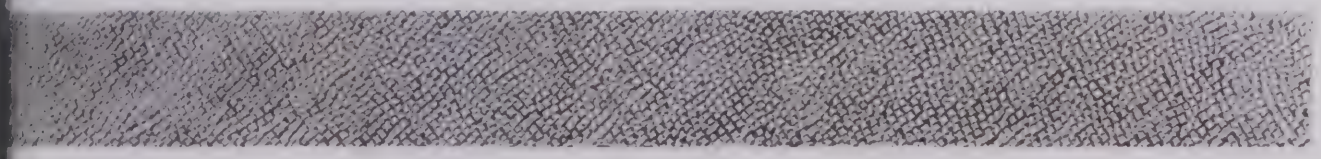
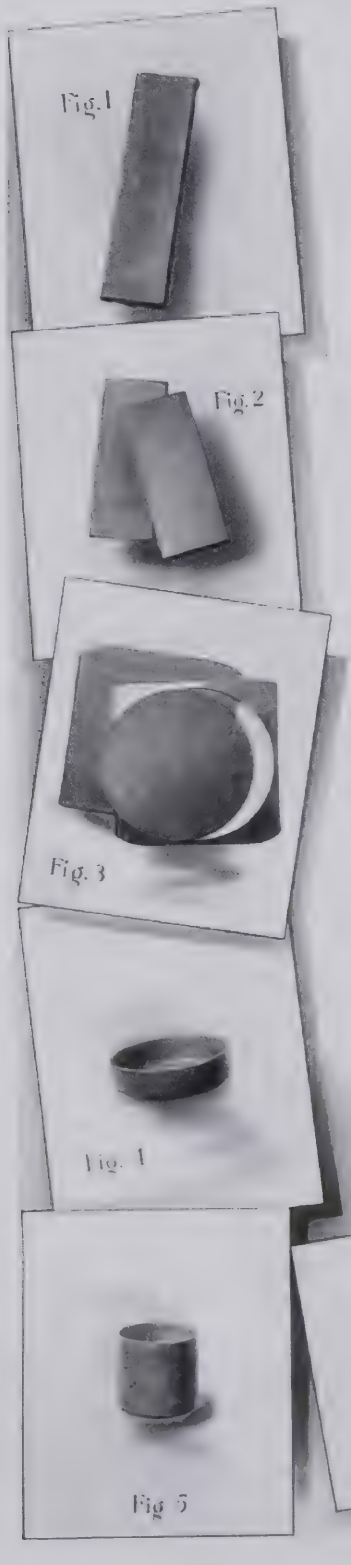


Photo showing the surface of Sharkskin prepared for eyeglass guards



What is Your Gold Filled Position?

OUR High Quality 1/10 12K, 1/10 14K Flag Lines in the Making.



ARE you a "quality" man? How many times have you not said to friends "I like the Stetson hat or shoe. I have to pay more for it but I'm always sure that I'm getting the best."

We do not resurrect a theoretical situation here to support our argument. For you know the above experience is part of your own. It is part of your intense desire for the satisfaction, happiness and relief that only the *best* goods will give.

You can readily appreciate therefore what it means to you when we set up a high quality standard on our Flag Lines and put forth every effort to maintain it.

We actively oppose the "just as good" product for the same reason that you pass it by in buying for your personal needs. We oppose it not because it means less a change for us, but because *we* know and *you* know that the slightest variation from a high quality standard means sacrifice in looks, wear and construction. People may tell you that it doesn't but you know better from experience. So do we!

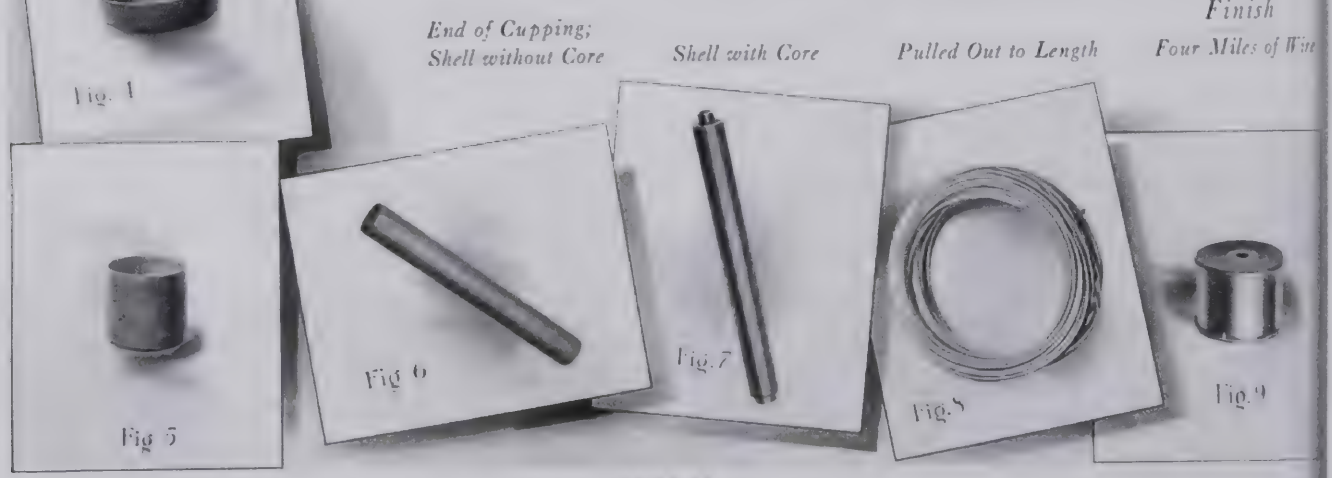
We have here a permanent line of gold-filled goods of superlative quality and at No Higher price than ordinary kinds, combining the enduring qualities of stiffness, color, finish and superiority in construction and design.

In actual assay the 12K and 14K gold-filled Flag Lines measure up to better than 1/10 12K or 1/10 14K. The Temples and Bridges, in anticipation of heavy wear, are reinforced with 1/8 12K, while Eyewires, Ends, and Straps are finished in 1/10 12K or 1/10 14K. The entire frame therefore assays better than 1/10 12K or 1/10 14K. Other incidental comfort and satisfaction giving features lie in the patented structural advantages of the AOCo Flag Lines. For instance, we have the Perfex, or pear tip, riding and cable temples, produced on automatic machinery demanded by such small and complicated operations. Then there are the beautiful comfort cables with new smooth tips, positively without peers in the world of temples. Another innovation, used hitherto only on solid Gold Goods, is the new small rounded back end pieces. Then too, our "T foot" Bridge, is an added feature, considered by experts to be the strongest and most endurable in adjustment made.

There is no secret about our Quality appeal. It represents the Quality of Brains in superlative workmanship. People have to pay higher for it as a result. But they want it the more for that very reason. They *KNOW* it is the best that can be made. It conforms to their ideals.

In our 1/10 12K and 1/10 14K we shall allow no deviation from the absolute High Quality standard we have set for it.

The current saying that people want the best nowadays is no mere dream.



On the Trail of Crookes Glass. Mysterious W. J. Burns After the Sales Department!

"What about this Crookes Glass?" writes in W. J. Burns from Philadelphia.

In came the whole sales department on the run to see us. "Sh!! What-t'ell-about-W.-J.-Burns who-is-he—the-great-detective? Will it get us in dutch with the poe-leese," etc., etc. ad infinitum.

"Stop!" said our skipper with the voice and gesture of traffic cops at bay. "Stop! Cease this untimely and hysterical outburst. We must keep cool!" He knew it was March.

By this time, in ways only known to the outer office force of a Southbridge factory, the news had spread that Burns was after Crookes Glass, and had inquired what the company knew about it!

"Amos, close the door on the outside: let none enter!" ordered the skipper. "Sit down sales dept.!" All faces were drawn and lined with portent—much portent! "First off, what did Burns want *specifically*" coughed the ad manager, visibly affected over the last word.

"He wrote as if he wanted to lay his hands on some Crookes Glass. Wanted to know who Crookes was, what use the glass was in blanks, whether these blanks were 6 in cylinder or not, and a whole lot of —— (deleted) fool questions!"

"Sounds pretty serious" butts in the skipper of the advertising crew. "Did he write in invisible ultra-violet ink?"

"No! wrote down right down in black and white straight to the point—wanted no evasion." Our sales dept. scratched his perplexed head and a fine flurry of white flakes moving shoulderward reminded us it was still winter.

The skipper paused, conferred in whispered seriousness with his right hand man—Morton—and read the correspondence over for the second time. Meantime ears were flapping—the outer office had put in its heavy work! Said they to others "we hear" etc. etc., "that the bosses are (don't tell a soul about it) to be sent up for ten years, have appealed to the Supreme Court and bid the company good-by. Isn't it a shame? But don't let on I said so!"

Our skipper was an ad man! He had an idea! Here it is! "What did you answer Burns, Eat-on?" asked he.

"Why, I told him Crookes Glass did good not harm; sezs I, 'Sir William Crookes is an English Knight, a great scientist; the only use of these blanks is to shoot the living life out of ultra-violet and heat rays.' Told him he should have known the AOCo wouldn't stand behind any Crookes unless he was an AA No. 1 man. Explained how it shielded the eyes from invisible rays, aided clearer vision and still was as pure as ordinary optical glass all in one. Remarked it was in-tinted for humanity and not for any particular class. What more could I have said, sir?"

"Nothing! Very good Watson! Mr. Burns is one of our valued dealer friends—you are more of a detective than he ever thought of being! Meeting's adjourned."

The congregation all filed out. We are still on the job, else this tale would never have been written for posterity.*

*W. J. Burns is a Philadelphia dealer.

Now Clearing Rough Torics

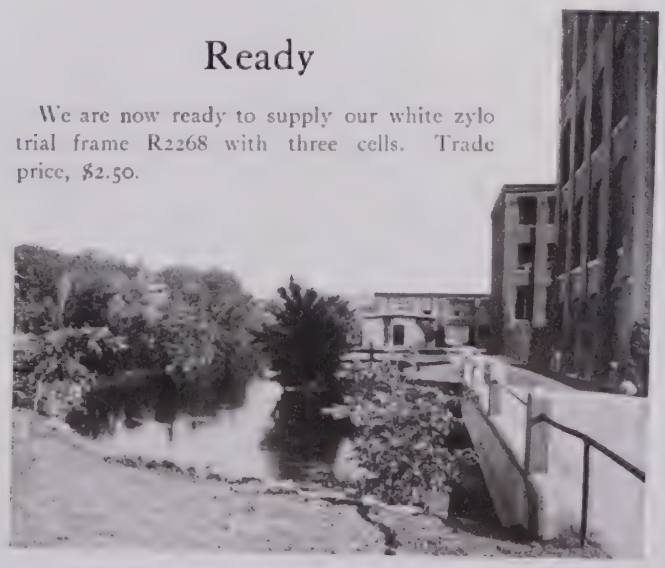
Following our practice of clearing the surfaces of Kryptok Blanks which enabled us to so greatly improve their quality, we have decided to extend the practice to our Rough Torics. While our Rough Torics have always had an unsurpassed reputation for quality we have realized the difficulty of detecting a minute imperfection on a Toric surface, where the opposite side of the lens was unfinished. This new departure enables us to examine the surface of a Rough Toric lens with the same surety of detecting and rejecting imperfect surfaces as on finished lenses. Orders for Rough Torics are now being filled with these improved lenses.

Forwarded To The Wrong Address Perhaps!

DEAR SIRS:—Please do not send any more matter to Mr. . . .
. as he passed away last October.
Signed MRS.

Ready

We are now ready to supply our white zylo trial frame R2268 with three cells. Trade price, $2.50.



HAVE YOU WAIT

We Timed This to Meet the Priced Protection Glasses. W now lead in putting quality,



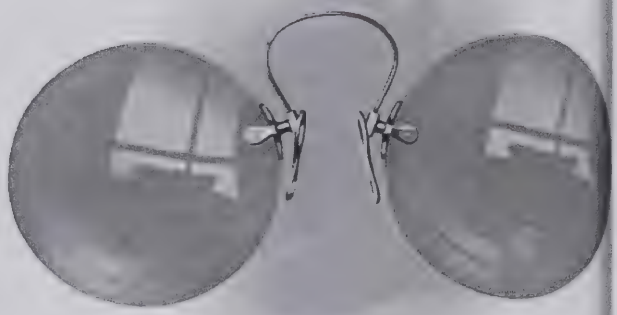
Overland No. 8195 C

LAST month we asked you to wait for the best line of popular-priced colored glasses on the market. Here it is, *in five distinct designs*, each adapted to a certain protection usage or a particular taste. An especial feature in all designs is the choice of three colors—amber, Fieuzal and smoke at present.

Examine first this Overland Tourist design, a protector, in frames and rimless spectacles, against the ultra-violet and heat rays. Each spectacle carries with it the beautiful tan or wine colored case shown here, that tucks itself away in the pocket like magic.

	Trade Price per Gross
8145 C, Frames gold plated, drop eye, cable, Mi Coq.	$40.00
8195 C, rimless spectacles, gold plated, drop eye, cable, Mi Coq.,	42.00





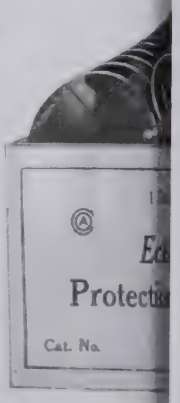
Eclipse—White Metal, 8023.G.P., 8123

THE Eclipse line is another design in smo Fieuzal and amber that affords protect more particularly against glare from s and sea, dust and grit.

We have constructed this line in three sty of the best gold-plated and white metal qua stock possible to put into a moderate-priced colo glass—*1*. Eyeglasses, *2*. Frames of White Metal *3*. Rimless spectacle mountings. The spectac have the cable temples in both white metal and go plated, also regular temples if desired.

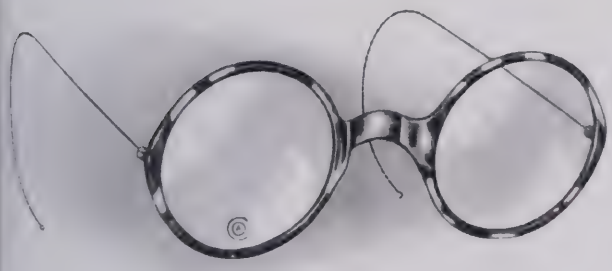
For display purposes we have packed these ornate boxes designed by men who have studied years the art of attracting the public.

For a very nominal cost of 75 cents per dozen cards you can get the striking orange and white window card shown in the accompanying illustration, also small cards with retail prices (25c, 35c, 50c) furnished with each dozen free. We call particularly to your attention the fact that there is no line of its kind on the market anywhere today carrying such effective display matter. We are not trying to force it on you. We believe you will see the intrinsic merits of the entire line without words from us.



) for This Colored Set Line ?

l Demand for a Line of Moderate ed in high quality tinted glasses. We ion and variety into this popular line



Roadster—No. 8050

ECLIPSE PROTECTION GLASSES

t out in 3 different styles.

Eyeglasses. *Per Gross*

	White Metal, 2" Hoop spring, Sanitary XC1 Guard	40 mm	$21.00
	Mi Coq.	45 mm	21.75
	The same in gold plated	40 mm	21.00
		45 mm	21.75

less Spectacles.

t. No. 8195 gold plated, drop eye, cable.

Tan colored cases, black lettered. Mi Coq. amber $42.00

Frames. White Metal.

	48.5 mm lenses, SS Bridge 47 style		18.25
C	48.5 mm lenses, SS Bridge 47 Cable	48½ mm	21.35
	Same as above but gold plated	48½ mm	18.25
C	Cable	"	21.35

3. Rimless Spectacle Mountings.

8090	White Metal	48½ mm	27.00
8090C	Cable		30.00
8190	Gold plated	48½ mm	27.00
8190C	Cable		30.00



ROADSTER. The aristocrat of our entire colored set is the Roadster design. This design is provided in spectacle style only with zylonite fronts. The temples are gold plated comfort cable, fitting snugly over the ears without friction. Each pair of spectacles is encased in a luxurious royal purple box with beautiful gold-lettered and designed cover shown in the illustration.



Eclipse Counter Card 75c Doz. Card

Roadster:— *Per doz.*

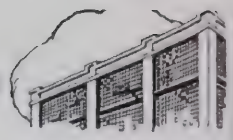
Zylonite front with 42 mm eyes inset bridge, gold-plated cable temple $5.25

JAPTOL is the name of our superior black finished metal spectacle design, set with amber, Fieuzal or smoke lenses. Each frame is in an individual box. It is one of the handsomest designs in the entire set, is endowed with everlasting wearing qualities and cannot break easily.

Japtol I-Rest Glasses. *Per Gross*

8236	Japtol Frames SS bridge 47 bend 45mm amber	$42.00
8236C	" " " Cable	45.00
8246	Japtol Frames SS bridge 47 bend 48½ mm	45.00
8246C	Cable	48.00



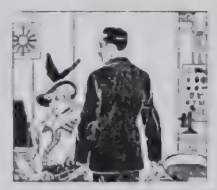


Four Fits-U Lens Cleaners—We Chase Dirt

Call 'em Lens Wipers, Eyeglass Cleaners or what you want to, at last we have them! Our Fits-U Cleaners are as pink as an infant's complexion, effective as the old hot water bag and serviceable as the ancient and honorable family cook. They are strictly careful never to scratch lenses, refuse to associate dirt with glasses and in general are the first aids to optically inclined people. They are as necessary to the wearer of glasses as a handkerchief is to the nose on which it perches. The handkerchief's all right in its place, but as a lens cleaner it is woefully inapropos—it scratches the lens surface, and is as popular to a lens as a polecat is to a Society Brand sport.

But Fits-U's and lenses are natural affinities. They take to each other like a couple of long separated Frenchmen.

Now Fits-U Lens Cleaners come in this one color, are of the regulation size used generally by the trade and, as indicated by the illustrations, provide four changes of copy including your own imprints. Order by above numbers 100, 101, 102 or 104. They come for $7.50 per thousand. Write in to your jobber before these hotcakes go. A change of copy provided. Your name printed on this cleaner flashes before the victim's face at each wipe.



We are constantly adding new and attractive styles in optical goods and will be pleased to have you call in and inspect them at all times.

WILLIAM H. FREEMAN, OPTICIAN
1443 SO. MAIN STREET
JACKSON, MICH

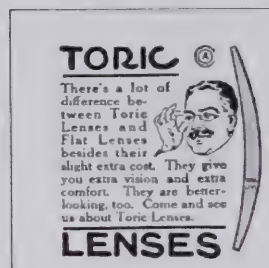
No. 101
FITS-U LENS CLEANER



IF at any time your glasses need adjusting bring them in and we will be pleased to do it free of charge.

EDWARD H. THOMAS
OPTOMETRIST
1828 WILLIAMS ST
STAMFORD, CONN

No. 102
FITS-U LENS CLEANER



FREDERICK JAMISON
OPTOMETRIST
48 JACKSON AVENUE
WATERLOO, IOWA

No. 100
FITS-U LENS CLEANER

GEORGE H. GOULD, OPTOMETRIST
1438 WASHINGTON PLACE
BALTIMORE, MD

No. 104
FITS-U LENS CLEANER

COLORED SET—Continued

SHELLOID To cultivate that class of trade that wants protection, distinctive style and a moderate price combined in one pair of glasses, we originated and constructed a third design called Shelloid. This design has a Zylo rim on the eyeglasses which gives the line tremendous distinction and should be one of your greatest sellers. It includes the strength, constructive features and intrinsic merits of the Overland and Eclipse gold plated and white metal lines, while providing the Zylo rims.

Communicate quickly with your jobber.

				Per Gr.
8024	White metal eyeglasses 2" Hoop spg.	40	mm	$33.00
8034	Sanitary XC1 Guards Mi Coq.	45	mm	34.50
8124 / 8134	The same as above except gold plated	40	mm	33.00
		45	mm	34.50
8084 / 8094	White metal SS Bridge 47 style—	45	mm	40.50
		48.5	mm	45.00
8084C / 8094C	The same with cable			43.50
				45.00
8184 / 8194	Gold plated SS bridge 47 style—	45	mm	40.50
		48½	mm.	45.00
8184C / 8194C	The same but with cable temple			43.50
				45.00

Amoptico

Reg. in U. S. Pat. Off.

Vol. III March, 1915 No. 12

Published Monthly by
American Optical Company
1833-1915

Manning M. Wells, President — Albert B. Wells, Treasurer
J. Cheney Wells, Vice-President and Secretary

General Offices and Works
Southbridge, Massachusetts, U. S. A.

New York 15 Maiden Lane
Chicago 5 S. Wabash Avenue
San Francisco 140 Geary Street
European Agency,
American Optical Company, Limited
39 Hatton Garden, London, E C
Cable Address: Amoptico, Boston
Western Union Code used

Manufacturers
Spectacle and Eyeglass Frames, Mountings and Material, Eyeglass Chains, Automatic Eyeglass Holders, Trial Sets, Trial Frames and Accessories, Automobile Goggles, Lenses, Spectacle, Eyeglass and Goggle Cases, Optical Machinery, Tools and Supplies, Etc.

Copyright, 1915, by American Optical Co.
Permission to reprint articles granted on request

What Hit Our Superintendent!

OUR Division Superintendent at Lensdale, H. W. Hill, was approached sometime ago by one of those fellows you meet every few weeks. This one was a personal friend and came along beaming all over. Sezs he to Harry "I've got the *best* glasses in the world; bought them at the 5-cent store; how much do you think I paid for them?" Harry's wizard at lens figures and came right back sharply "ten cents!" "Well," added the p. f., "I've been bothered to death with my glasses; spent tons of money, and here I buy these and find they're simply great!" We don't know what happened in the meantime but after the superintendent recovered he said reprovingly, like unto a father to his wayward son, "my friend, what's the use of all my years of lens making after that? You admitted your prescription on your old glasses was wrong the moment you went into that store. Otherwise you'd have stayed out! Now, I ask you, if you were ill would you go to a cheap doctor? Absurd! Of course not, you say! Apparently you, a man of considerable intelligence, do not realize you have a precious organ—your eye. If you did you wouldn't go to a store and even try to *fit yourself*. So go to a responsible oculist or optometrist my friend—you're new glasses will stick on your nose and they won't hurt you perhaps—but neither will they cure you! That's all!" The friend reflected a moment—admitted the superintendent was right—as they all do—and joined the long list of non-thinking converts who seem to use their intelligence on everything except the eye itself.

Our Model Window

In our studio atop the building we have just built and installed a brand new model store. Our first photograph of it you will note on the next page.

It was designed at considerable expense. With it we plan to help the dealer. By incorporating new displays, new ideas in it from month to month, and publishing these in Amoptico our great list of subscribers can develop from it—at little or no expense to themselves—novel window displays with which to attract the passer-by. We hope it will be as successful as we anticipate, but it must be used consistently to be effective. A store window either is its owner's most constant salesman or else betrays him!

To reward interest in this venture we will award a monthly prize of $5.00 for a photo of the window display—using AOCo goods that best carries out and improves upon the idea suggested in our model display.

Wouldn't You Shine to a Man Like This?

Las Vegas, New Mexico,
Feb. 11, 1915.

Dear Sirs:—Replying to your favor of January 22nd, would say that I find the AOCompany's "movie" slides the best because they seem to have a way of getting the public's attention, besides being clear and perfect in workmanship. I am glad to have you know that we are using the Fits-U eyeglass mounting almost exclusively, as we find it has a wide enough range of adjustment to cover all of our needs, and is not as fragile as some other patents. I wish to thank you for the expression of your interest in helping us build up the business, and for the advertising matter, the cost of which we realize is no small item.

Signed—Robt. J. Taupert.



Leaving Main Factory Towards Lensdale



A Dealer's Window

AS announced on our editorial page, we have built this model window in our own studio. We conceived it as a means of stimulating our dealers to interest in window display—a subject of great possibilities, but one which requires more attention than the average dealer is willing or able to give.

We shall from month to month give you basic ideas for new displays. From our photographs you may, with small loss of time, develop your own windows. The material required will be simple and inexpensive to obtain, and a nominal prize of $5.00 will reward the dealer each month who sends the best photo of an AOCo Rice Leaders Ass'n display, for that month, using the line of AOCo goods featured in our model window. Photos must be submitted by the twentieth day of the following month.

This window was devoted to our Motor gla of all styles. The model man, automobile tire, w can be borrowed, and dark greenish brown curta material, according to the size of the tire, are that is necessary. The material required is practica ready at hand. On the tire, suspended from the ceiling, we painted the Safety First inscripti By using the containers in which Vogue, Speedw and Kilglare Motor glasses are shipped to you, added the foreground display without additio expense. The attention of the passerby havi been attracted violently to the window, he bec interested in the display itself, the buying impul was aroused and you see him stepping into t store. Try it out, even if you copy this direct. Th is the Motor glass season and your display will b timely and effective.

NOVIOL

At last an American Made Colored Glass for American Trade.

WHILE this country boasts many up-to-date glass works of large size, hitherto none of them have given particular attention to the manufacture of optical glass for the manufacture of spectacles and this has nearly all been imported from abroad.

However, scientists in this country have been conducting vigorous and exhaustive research experiments and have for the first time produced an optical glass—Noviol. Not only have they produced a glass, but a unique glass possessing properties hitherto undreamt of. Just as we believe that our Sir Wm. Crookes Glass is the last word in tinted glasses, so also do we believe that this Noviol Glass is the last word in colored glasses.

It is an almost impossible achievement that such a splendid glass should have been made by the Corning Glass Works upon what was their first really serious attempt to make optical glass on a large scale. Before we go on to describe this in detail, let us see what is required of the ideal colored glass and examine the theories underlying them.

Why Noviol is better than any other Colored Glass.

If one lays down a piece of Noviol and Amber or Euzal side by side or any of the large quantities of greenish glasses now on the market, one sees at once that the Noviol is bright and sparkling like clear running water whereas the others are dull and muddy looking. To put it scientifically the Noviol has a high transmission for light, whereas the others are cutting down some of the light and this is one and a very great reason, why the Noviol is superior to the other colored glasses.

Another reason lies in the fact that Noviol absorbs a greater percentage of the harmful heat rays than any of the others. In the lighter shade it absorbs 40% and in the darkest 60%.

A third reason lies in the fact that Noviol removes the ultra-violet, violet and blue more completely than any of the others. The light shade which can practically pass for a tinted glass, removes all the harmful ultra-violet rays; the medium shade removes almost practically all the ultra-violet and violet, while the dark shade has all the ultra-violet, violet, and blue light eliminated.

A fourth reason is that they let thru the red, yellow and green more brilliantly than any other colored glass.

Finally this glass possesses one more wonderful and unique property not shared by any of the other colored glasses—when ultra-violet light is absorbed or cut off from the eye by a colored glass it is as a rule changed into heat, altho the amount of heat formed is probably so small that it could never be detected. However, Noviol does not change the ultra-violet into heat, but it changes it into light that the eye can see. We have here then a glass that is changing invisible light into visible light and thereby increasing the illumination. Therefore we have the wonderful and paradoxical effect of a glass giving more light to the eye than actually enters the glass. No other glass that we know of now on the market has this property except the Crookes Glass.

Noviol is Manufactured in Three Shades.

Light — *For General Use.*

This is the one that is recommended for all general uses in the place of white glass. It is of a very light canary tinge, so light that the fact that the lenses are tinted at all is not observed by the wearer, nor is the fact evident to an observer except by examination.

Medium — *For Outdoor Use.*

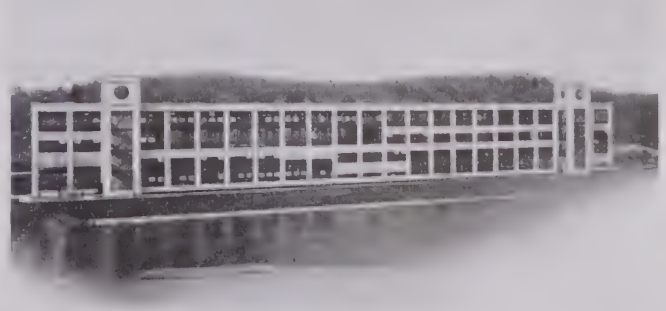
This tint is of a decided canary tinge, and is particularly adapted for use in automobile goggles, eye protectors, and for the use of shooters, engineers and firemen, and in any place where a need is indicated for lenses that will shut out the glare effects from the sun, or from intense artificial light sources, and at the same time does not cut down the intensity of illumination sufficiently to affect the acuity of the vision. The diminished visual acuity that is caused by blue atmospheric haze is also done away with.

The Medium shade is, we recommend, an ideal glass for goggles, and for shooting and for any effect where sharp definition of objects is required and protection from artificial sources of light.

Deep — *For Occupational Use.*

This is more nearly a true yellow and is the extreme depth in which NOVIOL Glass may be procured. It is recommended for use where special glasses are needed because of the occupation of the wearer making necessary a degree of protection from the intensity of light that would not be afforded by the medium tint. It cuts out, or eliminates, not only all of the ultra-violet rays, but also all the deeper blue and all of the violet of the visible spectrum, which are the rays in the visible spectrum causing fluorescence. At the same time it does not materially decrease the intensity of illumination, and actually does increase acuity of vision. This shade is also desirable for the uses as covered by the description of the medium shade whenever the wearer desires or needs greater protection from extremely brilliant light or reflections, as is the case in mountain climbing, ocean travel and tropical wear. It is recommended for use on very brilliant days to cut out too brilliant a light, at the same time giving that sharp definition of object which the medium shade gives. It will be invaluable in goggles where a dimmed light is necessary.

We are exceedingly proud to market this, the first of the optical glasses to be manufactured in America. We predict that this glass will take the place of Amber absolutely for automobile goggles. This is the auto season. Inquire of your jobber, and he will be able to supply you immediately.



Amoptico



THE AUTOGLAS



(Patented May 2, 1911)

NO OPTICAL STOCK IS COMPLETE WITHOUT

THE AUTOGLAS

Trade Mark, reg. U. S. Pat. Off.

IS the only hinged bridge Eye Protector made, as this is a patented feature that cannot be used except in the AUTOGLAS.

Retail price, with standard Amber Lenses, each $5.00. Write your jobber for particulars. May be procured with white, or any color desired, at a slight additional cost.

Do You Believe in Signs?

An AOCo Family Crest

FANCY a lustrous black crest of the AOCo, a transparency with beautiful crimson lettering outlined in gold, adorning your shop door window. We are so pleased with it that we've put one up on the office door here and have had trouble in doing any work since, so heartfelt and loud are the exclamations of the office force who pass and view it approvingly. Even the President chanced in the other day—work? Say! how we did apply ourselves—and exclaimed something appropriate and flattering, not having seen it before. We looked up startled-like, blushed to the proper color and resolved then and there to tell you about it. It now becomes a trade secret—be sure to whisper it around and order direct, care of publicity department. There are some subjects we don't care writing about, but honestly this one should be handled by a Shelley—it's exquisite. Don't let it pass, for it will be an everlasting delight to the eye. Write in; they're free as the ozone.



While They Last!

THESE green and white No. 17M44 poster stamps are at your disposal. We have given away 162,000 of these already. Considering the demand we are obliged to limit your orders to 100. So come while they last—no letter is complete without one.



No Fault of Ours!

Finds Man Model Not Model Man.
(N. Y. Sun)

Sister of Cuban Secretary of State Tires of Supporting Jealous Husband.

Mrs. Elise de la Guardia de Aguiar,..... in the Supreme Court yesterday to prosecute her suit ... Sebastian de Aguiar, who is an artist's model when he work...

Announcement!

THE price of our M72 Automatic Rimless Edger, owing to perfected improvements, has been raised to the trade price of $156.25.

Stop Your Ticklin' Jock!

Two of Our Finest!

Aha! You say. I've seen this before. Sure ling—September AMOPTICO, page 6. You never pected all this young life bunched up together to , did you? You never dreamed these smiles could de and the little wee hands stop shaking? Perish e thought,—but our representatives, never!

Now this chipper, dapper chap on the left—sh! 's brand new dope from a visiting English customer, s known among the trade in London as "Jock" loseley of the AOCo, Ltd., twelve years a member the City of London Artillery. Of nights, when he s nothing else to do, "Jock" attains to heights dreamed of—stands behind an aëroplane gun, they , on the Arch, hand to brow, peering t to right through the inky blackness (Dick erriwell). Woe betide the aviator who tries to put e over on this Arch defender,—England's Eye otector! Te Salutamus! Our informer saith merous invisibles came sailing through the ultra- let but were cut off. (Testimonial) Jock wears ookes Glass! Fool Jock? Boohbah! Daytimes moves and has his optical being in our AOCo ndon office. Directly above him and to the right the picture is our A. C. Smalley recently sent to n Francisco to manage our coast branch. They k friendly, don't they? The headline explains the



The Men with the Sharkskin Grip

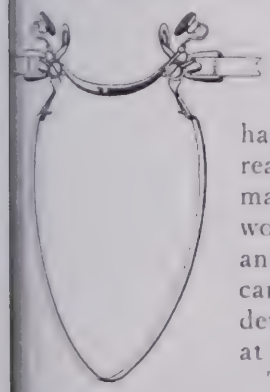
outward symptoms. But inwardly Jock's tickled too because Smalley just asked him to sing and he's staccatoed, falsettoed and trebled an answering "Yes!" Etc. Etc.

But whatever the kidding in process, this article is to serve a two-fold purpose—to introduce them, one to the other, again, and to recommend them both to you as sterling AOCo representatives who possess the winning personalities and handshake of genuine friendship that commend them to hosts of friends. In his new position at the Exposition City we wish you no greater pleasure than cultivating the acquaintance of our Mr. Smalley, whom we chose from among many to serve you on the Coast.

Our San Francisco office is ever at your disposal, particularly during the Exposition; we expect you to use its telephone, hotel list, writing, and other facilities upon arrival.

he Latest "Wrinkle" from England

Mr. A. Benson Ray, a Fits-U Luxe enthusiast of ry, Lancashire, recently favored us with a sample of device which he has been using with success for some little time as an aid in fitting the Fits-U Luxe.



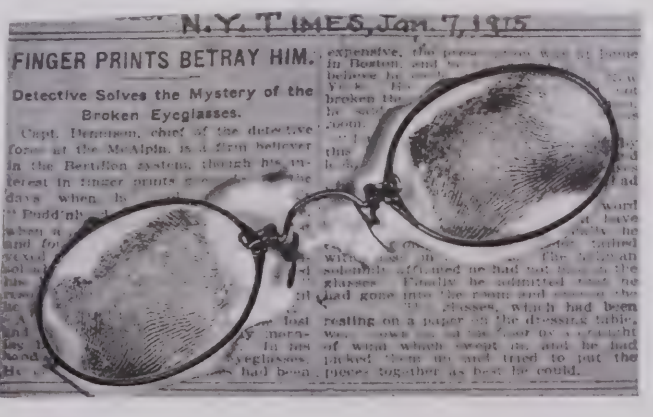
While not an absolute necessity we think perhaps there are some of our readers who might care to make use of this idea in their work. So we have shown here an illustration from which one can easily make up such a device with simple materials at hand.

The device is composed ply of a spring formed in the shape of a letter with a portion of the extreme ends turned in- d. These ends, as can be seen from illustration, tended to catch in the finger clips which move upper movable guards of the Fits-U Luxe; the ard tension of spring will then hold them open eir widest extension, while fitting the lower or fixed guard to the patient's individual requirements may go on with ease and simplicity.

Crookes Says Radium Tints Diamonds

Sir William Crookes, F. R. S., finds that on exposure to radium emanation diamonds become of a full sage-green tint, the depth of which depends on the time of exposure. The color continues undiminished for years. What effect, if any, radium has on glass is a question of interest to us. Probably a very marked one, inasmuch as we know ultra-violet rays turn white glass to amethyst.

The Fingerprint Always Fits-U



N.Y. TIMES, Jan. 7, 1915

FINGER PRINTS BETRAY HIM.

Detective Solves the Mystery of the Broken Eyeglasses.



YOUR WINDOW CARD FOR APRIL

Send For It

Put it in your window so that the people in your town who see our advertising will know that you sell our goods.

Ask also for the April ad for your newspaper and the April lantern slide for your picture theatre. They are all sent free, imprinted with your name and address.

ADVERTISING DEPARTMENT

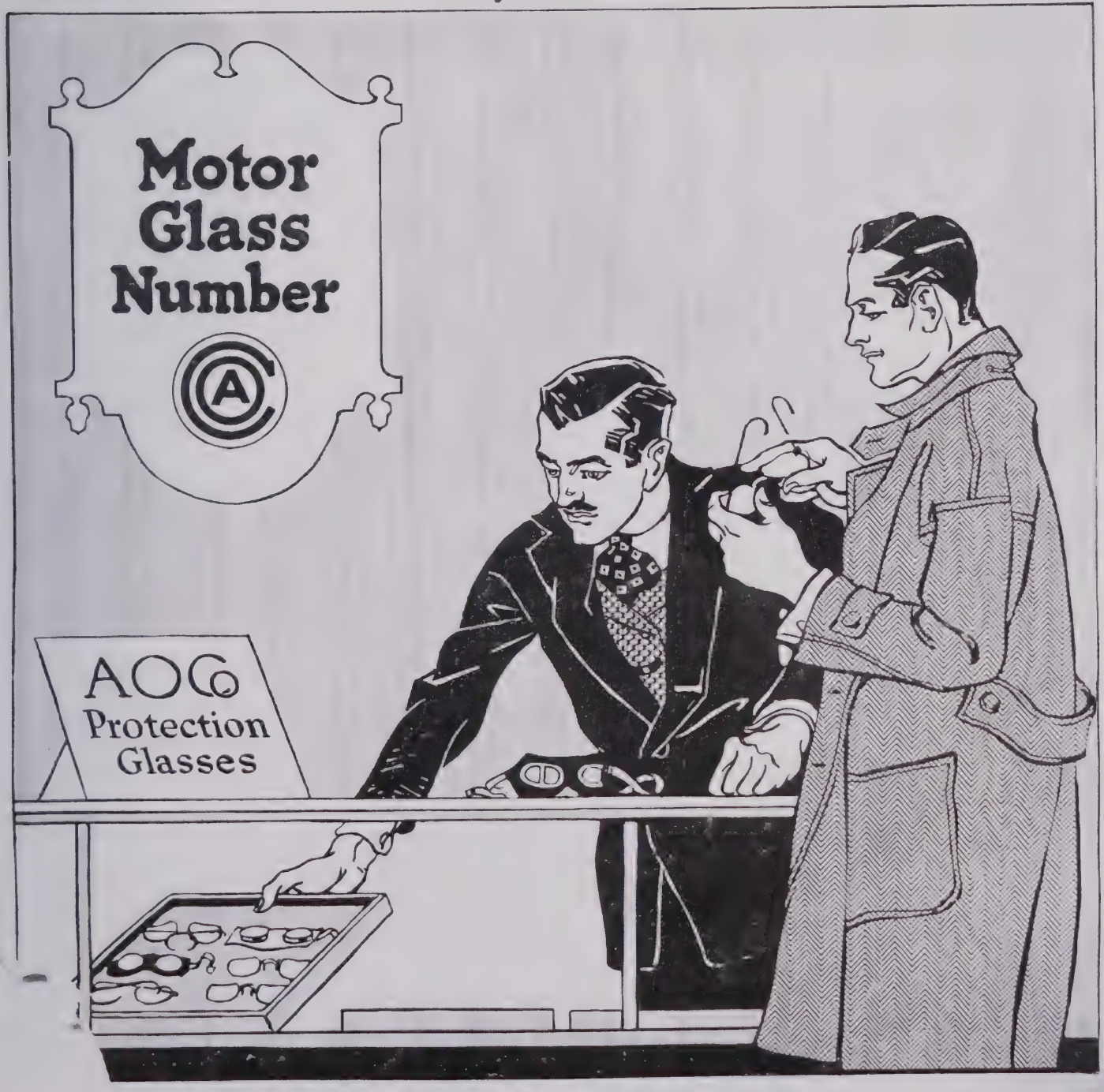
American Optical Company

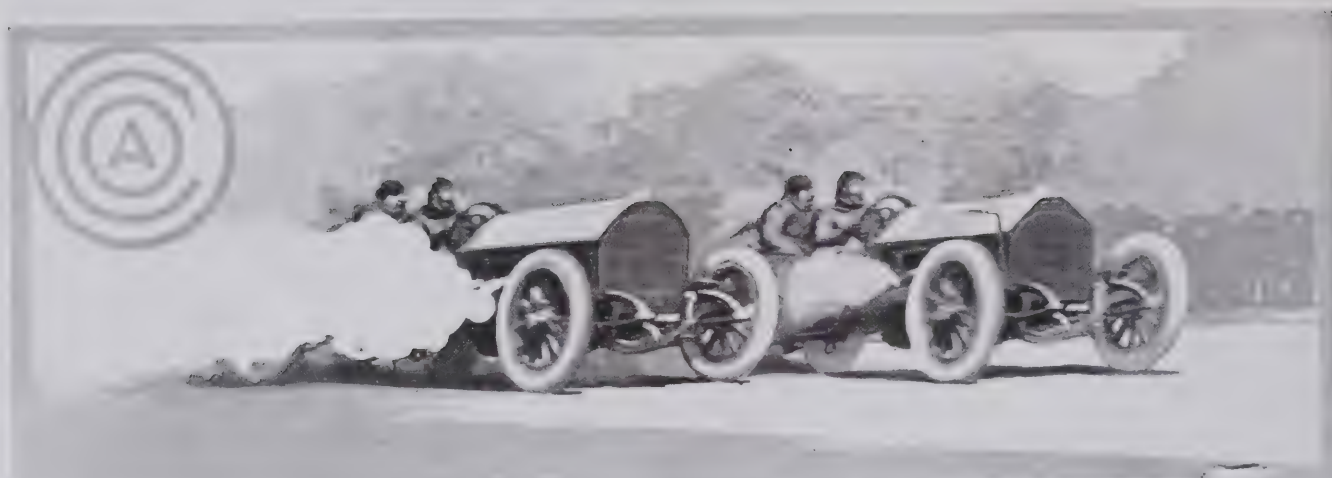
SOUTHBRIDGE, MASS.

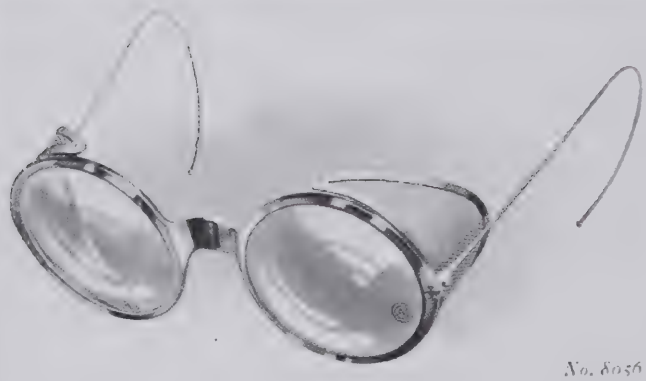
Amoptico

Published by the American Optical Company
at Southbridge Massachusetts

Vol. IV May, 1915 No. 2







No. 8056

If You Are Any Judge of Values—

Our "Eyedeal" Motorglass is the most optimistic motorglass with pessimistic prices produced for some time. Read on!

Eyes and Bridge: This is something new, a combination which we do not believe can be duplicated for anything like the price. A highly finished Zylonite frame, with 45 mm. eye and a cleverly designed inset bridge which not only adds to the beauty of the frame but serves the useful purpose of keeping the eyelashes of the wearer away from the lenses.

Lenses. The lenses themselves are carefully selected mi-coquille amber.

Screens: Gold plated screens of just the right shape to fit comfortably and keep out all the dust and dirt of the road, are attached to the eyes with our new invisible (patented) clincher joints.

Temples and Endpieces: Large comfortable gold-plated temples with a neat clincher end-piece add the final touch of "tone" and richness necessary to make this glass stand out from the general run of automobile eye protectors.

Cases: We have put our Eyedeal in a number 1357 Enameled case; we are rather proud of this case, as we spent several weeks experimenting to get the soft mouse gray lining, and we think that we have hit it just right. The lining of dark gray velvet sets the Eyedeal off in magnificent style.

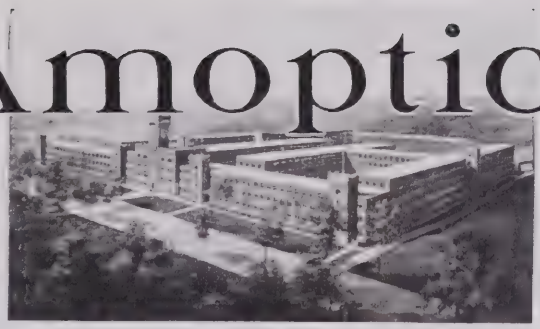
Low Price: We are able to put a very low price on this glass with case: at $12.00 per dozen and a retail price of $1.75 to $2.00 per pair, this makes a very profitable article to handle. Furnished in Amber, Smoke or Fieuzal lenses.

We are ready to make quick deliveries, but if we are any judge of values our stock will not last very long, so we advise you to order early from your jobber.

Price $12.00 per doz. Beautiful gray lined Japtol patented self-closing case.

Amoptico











We Anticipate Every Want in Motorglasses

IT is notable that within recent years the manufacture of Spectacles and Eyeglasses as a protection against wind, sun, dust and glare, particularly for automobile use, has shown some important changes and developments from the types in vogue only a few years back.

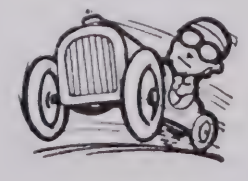
In the earliest days of motoring, when the automobile windshield had not come into general use and roads were particularly muddy and dusty the motor goggle was a heavy, stuffy and unsanitary eye-protector. It was trimmed with every variety of material such as cloth, leather, fur chenille or rubber, which was seldom cleaned. In appearance it so effectively disguised a person that playwrights vied with the manufacturer in encouraging its inroads on the historic mask and moustache.



The whole tendency since these experimental days, however, has been towards fewer and simpler styles. We now have light, good-looking, roomy spectacle types, and the lenses have grown larger so as to afford wider and clearer unobstructed vision. The point has now been reached, in short, where the manufacturer is no longer groping in the dark as to the public's wants, but has an accurate knowledge of the best motorglass construction and design.

Another factor responsible for the change in styles is human vanity. This motive is coming to be more and more generally recognized as a governing factor in the purchase of all styles of spectacles and eyeglasses. The uncouth appearance of old style motor goggles is even now remembered by the public with distaste. Evidence of this lies in the fact that manufacturers are endeavoring to do away with the name "goggle" in favor of the more pleasing term Motorglass, knowing the mild prejudice the former excites.

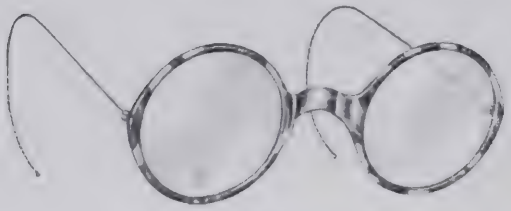
The change in public taste, as the motoring public rapidly increased, has trended constantly towards the motorglasses that possess a smart gold, gold-filled or zyloware style, and at the same time can be easily cleaned and quickly removed. Many of the former styles were annoying with their rubber or cloth headbands, which prevented quick removal, and disordered the hair.



Consequently the motorist of today looks as well and appropriately dressed on the road as he or she does in the drawing room. The stylish, sanitary and easy-to-remove motorglass of today sits lightly and comfortably on the nose, fits softly over the ears and when not being used tucks itself snugly away in the pocket of coat or automobile door. The old motor goggle was a nuisance. The new motorglass is put on and taken off unconsciously—one seldom realizes it's there, because it causes no trouble, or annoyance.



The prevalent styles are essentially American, most of which have been designed or developed by ourselves. They may range in price from the most expensive solid gold frames, fitted with Crookes or Noviol lenses, down through gold-filled and our newest style—the Eyedeal—to the

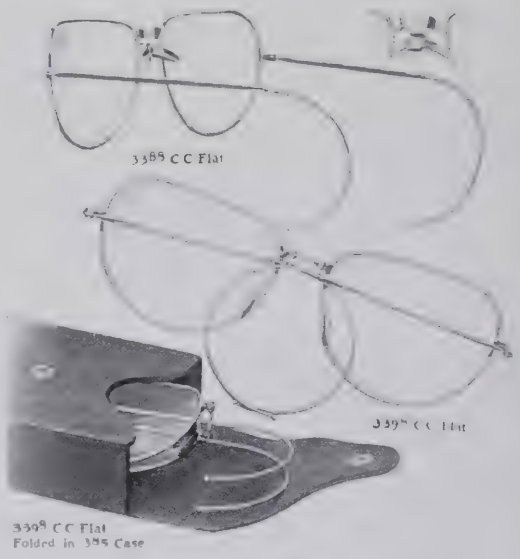


Roadster 8050

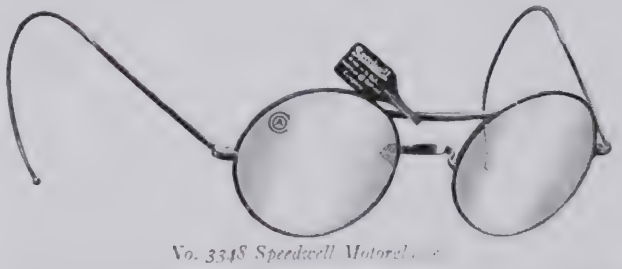
moderate priced, gold-plated colored set line, which includes the five styles, Overland, Eclipse, Roadster, Shelloid and Japtol.

The utility of this wide range of automobile and sun glasses extends beyond into the field of sports and outdoor pleasures and occupations where there is light or dust in abnormal quantities. The entire AOCo Protection Glass lines are simple, stylish and adapted to the means of people in all walks of life. The tremendous demand for our Popular colored set line indicates the growth and discovery of a new field, heretofore unrealized in its possibilities. People who never thought of buying automobile glasses before are now reached by this new line with its moderate price. The tremendous expansion in the automobile business with moderate priced cars is influencing thousands who've never before been able to accumulate the money necessary to buy a motor car. This, among other things, has opened up the new demand for motorglasses above referred to.

In the meantime, while the attention of the public has been centered on this new development the Popular Line of colored set goods—the demand for high quality, gold and gold-filled goods has continued to increase in such lines as the Vogue, Kilglare and Speedwell, where workmanship, finish, quality and style are the first and last considerations, above price.



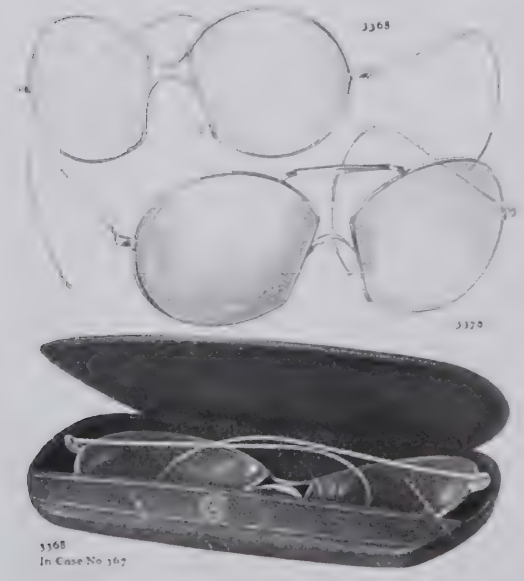
Vogue Motorglasses



No. 3348 Speedwell Motorgl...

In following the trend of motor and motorglass development, therefore, we have been so consistently and progressively alive to public wants and necessities that today our entire motorglass line is second to none. It incorporates sound construction, workmanship, superior lenses, and every possible variety of style and taste: and then, when all is said and done, the AOCo Motorglass line is *complete*. Who can claim a line as complete?

Within a few weeks our brand new Motorglass catalogue will be off the press. Send in your name and address now and we will mail you a copy when issued. In the meantime look over our newest design, the Eyedeal, on the inside cover of this issue.



Sportsmen's Glasses

CLIP THIS OUT AND SEND IN TO THE AMERICAN OPTICAL CO., PUBLICITY DEPT., Southbridge, Mass.

GENTLEMEN:

Kindly place my name on your list for one of your new Motorglass Catalogues, when issued.

Name

Street Address

City

State

Jobber.....



Sir William Crookes Glass Stands the Test

"The Proof of the Pudding"

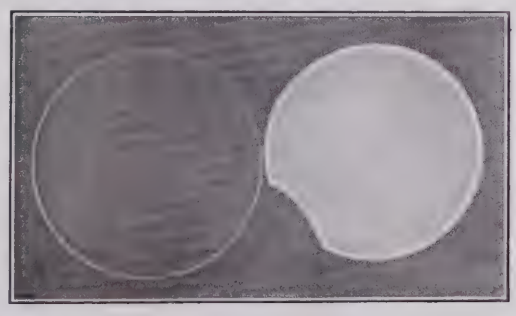
New Haven, Conn., Feb. 13, 1915.

American Optical Co.,
Southbridge, Mass.

Gentlemen:

Enclosed you will find proof of Crookes Glass printed in our photographic department.

You will see by the light print that Crookes Glass holds back nearly all of the chemical rays.



Ultra-Violet Rays affect Photographic Paper. Comparison, showing how they darkened one through white glass and how Crookes Glass stopped them, leaving paper white.

The proof of the pudding is in the eating; we are now making two pairs for Professor of Yale University, to take on his South American Expedition.

Yours very truly,
The Fritz & Hawley Co.,
L. Wilhelm, *Treasurer.*

NOTE:—Violet, as well as ultra-violet rays, affect the paper, but to a lesser and slower degree. Consequently, to reveal effect of ultra-violet, expose paper no longer than one second.

These Handy Fits-U Tools Speed Up the Shop Work

WE have now added these useful Fits-U Assembling Tools and Pliers to the long list of handy tools which we already manufacture. If you have occasion to work on fingerpiece mountings you will find these tools invaluable, not because they represent anything startlingly new, but because they afford that neat and ready assistance that makes work move along more smoothly and easily.

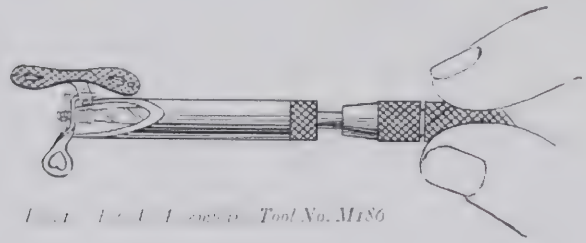


Fig. 1. Fits-U Assembling Tool No. M186

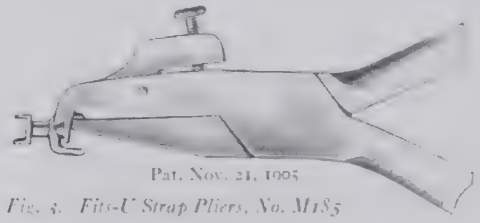


Fig. 3. Fits-U Strap Pliers, No. M185

Fig. 1 shows the Fits-U Assembling Tool No. M186 for assembling fingerpiece mountings or replacing springs and guards on fingerpiece mountings. The practical usage of this will be many times a day—if you have it you'll not have to worry; if you lack one you'll be annoyed for the want of a handy instrument to accomplish an object. The clamp of the assembling tool holds the screw, spring and guard by spring tension in the tool so that there is a distinct saving in time and a consequent relief from annoyance. The screwing of spring and guard to the bridge is then quickly accomplished, as in Fig. 2. Here (in Fig. 2) you hold the bridge between the fingers of one hand; guard and arm can then be quickly and easily screwed to the bridge. By pushing the tube or long collar forward slightly, the tool can then be released from the guard. After securing the spring to the bridge the work is completed.

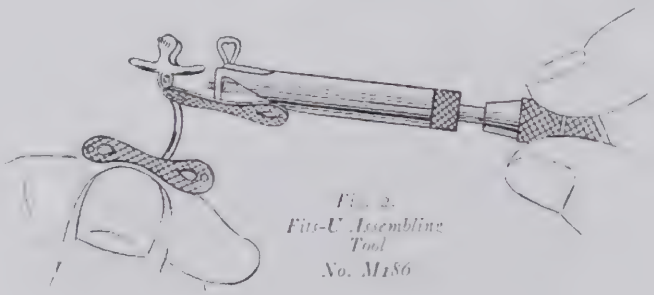


Fig. 2. Fits-U Assembling Tool No. M186

Our Fits-U Pliers, No. M185, are designed for widening frameless straps more than the ordinary amount, but in general should be used for fitting straps to all lenses, and widening and narrowing straps on all regular work.

1. Turning the thumb-screw back allows the adjustable jaw to open wide. 2. Then insert the lower jaw in the strap and bring the upper jaw with notches down on edges of strap ears. 3. Adjust the thumb-screw to allow for necessary widening of strap. In making a narrow strap wide it is advisable to do so by turning back thumb-screw and closing pliers, a small amount at a time.

Fits-U Assembling Tool No. M186 . .	$1.25 net
Fits-U Strap Pliers No. M. Adjustable .	2.50 "

You Will Never Know What Welcome Is

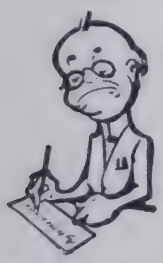
Until you visit our San Francisco offices, where we have endeavored to provide every facility for your comfort and convenience.

We have urged you by individual invitation to drop in on us at the Exposition. We now reiterate our earnest desire to welcome you, your families and relatives at our offices.

You will find our Mr. Smalley and staff the best little hosts you ever saw! So don't forget! The Exposition! AOCo Offices! And a big time. We're looking for you.

You Win Your Bet—The Whole Family Gets Into Amoptico

READ THIS! No home should be without it! Everything from "Asepsis" to Billy Sunday.



Gentlemen:—As we have recently opened a branch store at 1008 East 163rd St., would be pleased to have Amoptico sent to that address. It is now sent to our main store and I get it after its contents have been devoured by the staff there. By this time it begins to resemble an overworked dollar bill, so, to be consistent with my ideas of asepsis, I would prefer to get a copy of it right off the bat. Would also be grateful to you for window cards and for the transparency for the shop door window that your editor writes so feelingly of. "We sell American Optical Co. Goods." I find your familiar geometrical monogram on all our stock.

The people in the neighborhood from which we draw our patronage are educated, inquisitive, curious and well-informed as to the qualities of general merchandise and I want to feed those laudable characteristics with informing literature respecting optical goods. Our show window is ideal for display purposes and my idea is to change the character of the sign cards, etc., about every ten days a sort of bulletin service in which all of the newest designs and wrinkles in our trade specialities will be exposed to that fierce north light that turns glass green long green.

I recognize the value of your regular monthly advertising service and want to sit in the game.

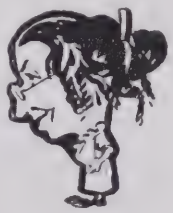
A Few Bouquets

Your publication Amoptico is the most interesting and instructive piece of optical literature promulgated at any price, cutting out, as it does, the irritating statistical, actinic short waves of the ordinary, superannuated, dry-as-dust, near-scientific optical bunk and eliminating the infra-red of the sensational yellow (paradox) journal style of alarmist propaganda.

Your goods, even the cheaper colored grades, such as the "ECLIPSE PROTECTION GLASSES" have a clean virtuous appearance, indicating that they belong to a good family and can be trusted in the dark. In this connection, consideration must be given to the fact that their fine, smooth finish imparts a pleasing and satisfying "feel."



I think I have had intimate relations with the whole coterie of nick-named finger piece mountings and a speaking acquaintance with most of them unfit for publication. At one time, their chief value seemed to me to be along the lines of physical culture as an athletic appliance for the muscular development of the digits. Since the advent of the "FITS-U" mounting with the "Schwab" guard, I have become converted. My wife calls it the "BILLY SUNDAY" mounting. She says I use less "language" now and she is not afraid to have me around when the minister calls. Seriously, I think its simplicity of construction, coupled with its effective utility, makes it the masterpiece of eyeglass mountings and any nose that cannot wear it does not deserve to be called a nose. A wart or a pimple is sometimes presented to me to fit nose glasses upon with the information that its owner's sister or cousin or somebody else can wear eyeglasses with no difficulty and "her nose is no better than mine."



A little powdered rosin, applied to the guards, will help some in a case like this. I have some doubts as to the ethics of this practice, but it appears to be the only way unless you have the nerve to tell a woman that she has a chasm where her bridge ought to be and that her sentence is to wear spectacles for life.

I hesitate and doubt my ability to suggest any improvement in the conduct of your esteemed trade paper, but I must protest against the publication, in the March number, of the disturbing information that radium changes the color of diamonds to sage green. Owing to the nervousness of my wife on this subject, I have been obliged to keep my stock of radium in the coal cellar and my diamonds on the roof.

MAYER OPTICAL CO.,
(Signed) Frances Hofman, Mgr.

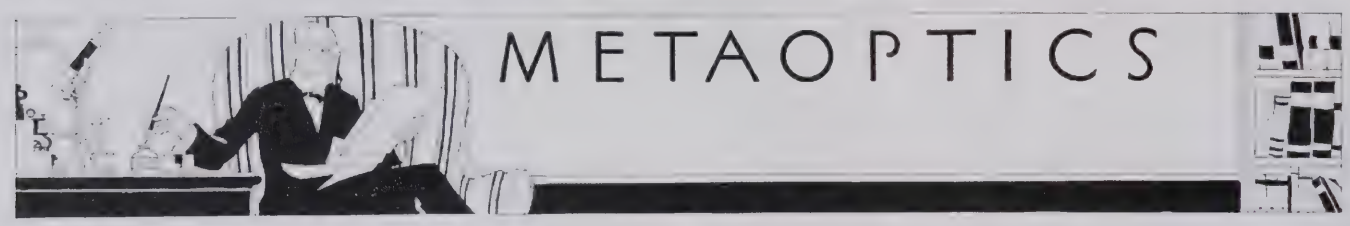
Appel's New Idea

Our article on "Fingerpiece Eyeglasses with Extension Posts for the 'once in a while' patient" in the November Amoptico has brought us an interesting and valued suggestion from W. W. Appel & Son of Lancaster, Pa. It should be of interest to the trade.

We showed at that time the necessity for extension posts in extreme cases where two eyes were at unequal distances from the bridge of the nose. Varying lengths of posts were necessary in such unusual cases to center the lens properly before the eye.

In several instances, say Appel & Son, where extension posts were inconvenient by reason of time and adjustment required, or conspicuousness, they adapted the lens to the difficulty by cutting its major axis longer. They say, for instance, "if 41 x 32 mm. gives the correct P.D. on the right eye, but the left would need an extension post, we use say a 45 x 32 mm. lens, which is less noticeable than the post." This way obviates the necessity of using the extension posts in some instances, although in general practice they find occasion to use extension posts quite frequently.

Trade inquiries wonder why we do not make more than one standard length guard post for our Varsity eyeglasses. We are ready to make shorter lengths on order, if desired, but you know it is a very simple matter for a clever shop man to cut off, shorten and re-solder long posts on special occasions.



NOTE: *This is the first of a series of articles, each one complete in itself, but the whole forming a comprehensive study of the complex nature of light and its properties. H. T. Reeve of our Scientific Staff will endeavor to make these articles simple, and interesting to everybody from month to month.*

What Is Light?

LIGHT is a form of wave motion originating in some centre of disturbance such as the sun, and traveling from that centre of disturbance in minute waves and at enormous speed in every direction.

Let us take a simple concrete example. Imagine a still pond of water and drop a small pebble in it. What happens? A succession of waves or ripples spread out from the centre of disturbance, yet the water itself does not move because, if you throw in a piece of cork it will float quite stationary, thereby proving that the wave motion of the water is merely a disturbance on the surface, traveling equally in every direction. The sun, then, is the centre of disturbance. We have at present only a vague motion as to what the medium is that carries this disturbance; we call it the ether.

Let us go further and examine the properties of these waves. If we put an obstacle to the waves in our pond they seem to go around the obstacle and meet behind it, whereas if we put an obstacle in the path of light waves they do not apparently go around the obstacle but the latter throws a sharp shadow. But after all it is only a question of the relative size of the obstacle; if you build a big breakwater in the sea, you get still water behind that breakwater, in that sense the breakwater is throwing a shadow. In other words you must have some obstacle comparable to the size of the waves.

Now light waves are excessively small, and if you have an excessively small obstacle in their path it is at once seen that the shadow of that obstacle is not sharp, but fuzzy; and if the source of light be a point, the shadow of the obstacle is distinctly seen to have light directly behind it. In other words the waves of light have been able to creep around the obstacle.

Now there are two important principles which must be distinctly understood in order to grasp the properties of light waves. The *first* is that waves all march at right angles to the line of their own front. That is, exactly the same way as a rank of soldiers marches straight forward in the direction square to the line on which it has been dressed. The *second* principle is that every point of any wave front may be regarded as a new source or centre from which waves will start forward in circles. In the sketch imagine P as the centre of disturbance. If there is placed a screen, X with a hole in it, in the path of the waves from P, all the wave fronts that come that way will be stopped or reflected back except that bit of each wave front that comes to the gap in the screen. That particular bit will go on into the space beyond, but will spread at equal speed in all directions, giving rise to a new set of ripples which will be again of circular form and having their centre not at P, but at the gap in the screen. The distance from



the crest of one wave to the crest of another is called a wave length. This distance is, strictly speaking, the width of the wave, but it is always referred to in scientific terms as the wave length. If ordinary light were composed entirely of one wave length there would be only one color to that light, but as a matter of fact there are thousands of waves of different lengths in ordinary light, so there are thousands of different hues or colors. It is a fact that these different sized waves affect the eyes differently, hence the reason that we are able to see colors.

By properly reasoning out the wave theory of light, the law governing reflection and refraction and the polarization of light becomes very simple. We have mentioned before that the speed of light is very great and in fact it is almost too great to grasp. Supposing you count ten to yourself very distinctly and take the time it will take in counting that ten; supposing it is about 5½ seconds, light would have traveled in that 5½ seconds just over a million miles. In other words it would have had time to go about 40 times around this earth. If then you try and imagine an express train going at 60 miles an hour and keeping that speed up right along, and going around the earth, it would take that train somewhere around 23 months to cover that distance. We have mentioned too, that the wave lengths of light are very small and it is almost equally difficult to grasp the size of these wave lengths. If you take a human hair as being about 1-1000ths of an inch in diameter you could pack about 33 of the longest kind of wave lengths of light within the diameter of that hair, while you could pack 250 of the shortest kinds of wave lengths in the hair.

That light had this enormous speed was accidently discovered by a Danish astronomer, who found that certain calculations with regard to eclipses were always about eight minutes off and he concluded that this was due to the time taken by the light to travel to him from the sun.

We have no mechanical form of motion that compares with light in speed, but we have many objects thinner than wave lengths; gold-leaf for instance, has been made as thin as 1-100,000ths of an inch, the film of a soap bubble must be thinner still and lines have been ruled on glass and metal as many as 30,000 to the inch. When we come to examine light with articles which have some relation in size to a wave length of light, we get some beautiful and curious results which will be followed out in succeeding lectures.

Speaking of Gold-Filled Are You Perfectly Satisfied?

IT is singularly and in some ways unaccountably true that a dealer will invariably specify distinctly the quality of the *solid* gold goods he buys in a way that will leave no question in the mind of the wholesaler whether 10k or 14k goods are wanted. And yet he will be seemingly indifferent to the quality of his goods in purchasing gold-filled wares.

It is a simple matter to guard oneself on this point, and yet many do not do so probably because there is no general appreciation of the fact that in the three karats of gold-filled stock, viz., 10k, 12k and 14k there are made several qualities or proportions which have a bearing upon the life of the goods that is even more important than the karat of gold used. It matters little what karat it is if there is not enough gold to properly cover the base metal sufficiently to resist wear and abrasion.

Through long experience it is now generally conceded that for the most satisfactory results the actual gold covering should be at least $\frac{1}{10}$ of the total weight on any given frame used under normal conditions. Whether this gold be 10k, 12k or 14k is a matter that can best be settled by the dealer himself from his knowledge of local conditions. It is also a generally accepted fact that gold alloyed to 14k is as fine as can be worn and still retain the necessary stiffness and resistance to wear, and that 10k is as low as is practical to work into gold-filled stock with satisfactory results.

In making gold-filled spectacles it is frequently found practicable to cover those parts most subject to wear, as Bridge and Temples, with a thicker coating of gold than is used on the eye wire, end pieces and straps. Sometimes, for instance, Bridge and Temples will be $\frac{1}{8}$ gold, with other parts $\frac{1}{20}$ or thereabouts, so that the entire frame will assay $\frac{1}{10}$.

The important thing that we wish to bring out here is not that you should use this or that quality and karat, but that having chosen what you want *you may be able to identify it after you get it.*

Do you know what you are getting for your money when you buy gold-filled goods? There are only two ways of being sure: to either have a sample frame assayed, or to depend upon the manufacturer's quality marks for identification.

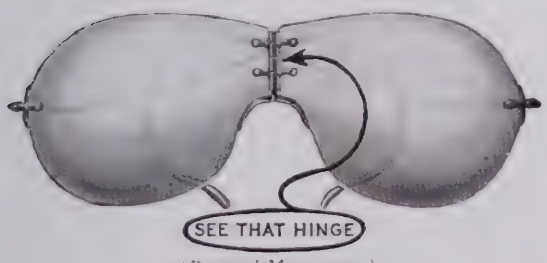
To protect your interests in buying AOCo Gold-filled wares we mark the quality on them, and for your own protection you should look for these marks.

Keep in mind the mark given that represents the quality of the goods you ordered; and when your shipment or prescription arrives look on the under side of bridge or spring for the AOCo Quality Mark.

Write the Publicity Dept., for Booklet A38 showing various quality and trade marks. This will assure you of your always obtaining AOCo quality goods.

THE AUTOGLAS

Trade Mark, Reg. U. S. Pat. Off.



(Patented May 2, 1911)

IN the AUTOGLAS, illustrated above, the special feature is the hinged center piece, which, together with the shape of the lenses, permits this eye protector to fit the curves of the face, thus excluding all wind, dust and flying particles, and yet affording perfect ventilation from the side.

Owing to the curve that this gives to the whole protector, and to the fact that the lenses themselves are of curved or deep meniscus form, this complete protection is given, and at the same time, the vision is absolutely unobstructed.

The lenses as regularly supplied are a light shade of amber, and are perfectly surface ground and polished; the same as the bent spectacle lenses.

Besides its wonderful adaptability in the plano meniscus or no focus form for the use of all out-of-door people, it is peculiarly adapted for use in the prescription form, with wearer's correction ground into the lenses.

The AUTOGLAS may be procured from all wholesale houses.

An Optical Humidor

An optical acquaintance sprung a new one on the train last week. He offered us a cigar—not that this was novel—from a row of ten standing up proudly within one of our old style paperboard spectacle cases. The cigar dealers know a good thing! Get into the tobacco business; we'll back you.

Send Your Full Address

Occasionally a dealer changes his address, or intends to, and neglects to note it in request for his imprints.

They will, therefore, confer a favor and save occasional mistakes if each request for additional matter includes the *full* address. We can then check up with our list constantly.

KeeLocK Is Perfect *Because It*

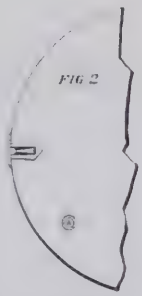
KeeLocK will earn its own way. No amount of argument, however subtle, would convince you that this is the most perfect, inconspicuous screwless strap unless it possessed superior merits of its own.

KeeLocK will be recommended by the trade, not upon somebody else's say-so, but strictly on the intrinsic merit of the mounting. If this mounting will not stand the most difficult tests, nothing we can say will help it. But we believe it will and submit reasons for our conviction.

In the first place the AOCo KeeLocK Strap is the product of necessity and common sense. It grew out of the trade-wide demand for an inconspicuous strap that would hold. Every factor in its construction is the product of hard reasoning. The several existing styles of so-called screwless mountings either sacrifice appearance to holding power, or holding power to appearance. KeeLocK claims both advantages at once—it is a beautiful, inconspicuous strap with a holding power equal to any now on the market. It should satisfy the most exacting critics.


FIG 1

To accomplish this the AOCo KeeLocK strap was constructed on the common-sense principle that it is infinitely better to reduce the size of the glass-covering surface of the strap making it inconspicuous—and at the same time gain very materially in strength by slotting the lens.


FIG 2

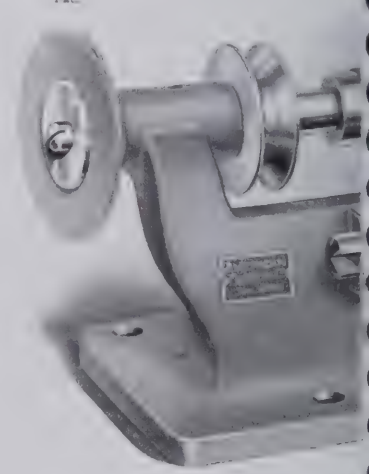
Into this slot a key, or wedge, is inserted and so cemented that it is impossible to pull it out—hence we have the KeeLocK. Illustration No. 1 shows the slot, which, unlike a drilled hole, affords no risk of breakage while mounting. There is no pressure; between the unyielding metal and the brittle glass is the film of cement.

The KeeLocK strap is much shorter and smaller than the regular screw strap. By ingenious design it is formed so as to reflect light from only one of its beveled sides at a time. This makes it appear even smaller than it is.

A careful examination of the strap reveals its clever and ingenious patented construction. (See Illus. Nos. 2 and 4). Note how the tiny key is made with a little shoulder at one end of the slot and a tapered wedge at the other. This provides for absolute alignment of the lens. The cement settles, forming another wedge behind the metal wedge head, making it impossible to pull out. Furthermore, beveled arms of the strap, the outer edges of which touch the lens surface, are hollowed out, allowing another recess for the Lenstick cement. A maximum amount of space for Lenstick is thus provided. The inside of the slot is left rough or unpolished so that the Lenstick adheres with extraordinary tenacity. The whole mounting is, therefore, absolutely sound, rigid, and in line and answers all criticism of prevailing types of so-called cement mountings.


(Patented)

While the straps are smaller and shorter than the regular Rimless construction, yet they are just long enough to completely cover the ordinary screw hole in the latter, so that if necessary old lenses or drilled lenses from your regular drilled lens stock can be used simply by slotting up to the hole. This makes the KeeLocK universally adaptable to all popular styles of rimless mountings.


(Patent Applied For)

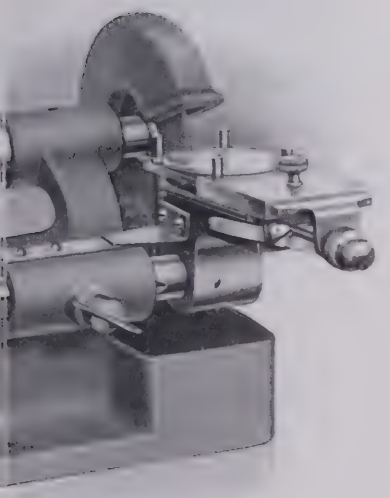
The first operation, slotting the lens, is extremely simple. The little machine here illustrated has a thin corundum wheel. The lens is placed on the platform between the four posts automatically centered without delay; being adjusted to the same depth of slot for all ordinary lenses, is pushed gently forward until



Answers All Criticisms of Screwless Types

stopped automatically. The process is completed in a twinkling. Adjustments are provided for grinding above or below center when required. Two machines of this type are ready,—the one in the illustration for the shop that has its own power; the other a beautiful, compact little machine complete with an electric motor, which can be attached to any convenient electric light socket.

The second operation, that of



Slotting Machine

mounting, is likewise simple, necessitating one pair of pliers for widening the strap, one pair for narrowing and an alcohol lamp. The Lenstick Tablets which we've produced are new and easier to handle than the powder.



Widening Strap

The special wedge, which so insures the firmness and rigidity of the KeeLocK, makes necessary the pliers. To widen the strap to fit a thicker lens the pliers (see Fig. 5) crimp the wedge and the strap expands without injuring the wedge or outside



FIG.5

metal parts. To narrow the strap, (see Fig. 6) pliers especially designed to fit the beveled edges outside press inwards increasing the angle of the bevels and narrowing the straps without marring the finish.

The cementing of the KeeLocK strap to the lens then proceeds rapidly and simply. A Lenstick Tablet is inserted in the strap and slot and each heated until the Tablet bubbles slightly. Then the two are pressed firmly together. Any excess Lenstick can be removed around the edges immediately in the usual manner prescribed by experience with screwless types and the best methods found available in shop usage.

The entire operation of slotting and mounting is possible, by our simple machines and accessories, in a shorter time than ever before. Simplicity is the one great KeeLocK operating advantage.

Standing out above all other features is the beauty and style of the KeeLocK. Nothing in Rimless goods has ever been made approaching it in handsome appearance. Behind it we have put every ounce of Quality at our command.

We commend it to your most exacting and sober judgment. If you find it stands on its own merits, possesses beauty, simplicity, adaptability to your present drilled lens stock and demonstrating or advertising possibilities, for all of which we commend it, then KeeLocK will have earned its own way. If there is anything in a name KeeLocK and the American Optical Co. should carry you far toward absolute confidence in this invention. We have not given you a just-as-good product. We have produced the Best and our appeal is solely to those who want Quality goods, or can be

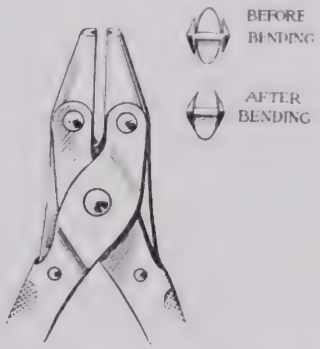
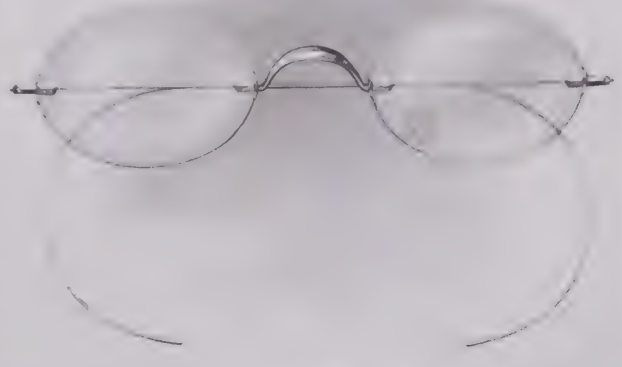


Fig. 6. Pliers for Narrowing Strap

persuaded that they are the only solid investment. Investigate the KeeLocK through your jobber who will quote prices and give you complete information. The verdict rests with you.



(Patented)

What Our Chemical Engineers Found in Lenstick Tests

This reputable firm says of Lenstick:

A. D. LITTLE, President
R. L. SCHNEIDER, Vice President

Please address all communications to the Company

L. MORE, Treasurer
F. WOODS, Secretary

Arthur D. Little, Inc.
CHEMISTS AND ENGINEERS
93 Broad Street

CES–S

BOSTON February 23, 1915.

American Optical Company,
Southbridge, Mass.

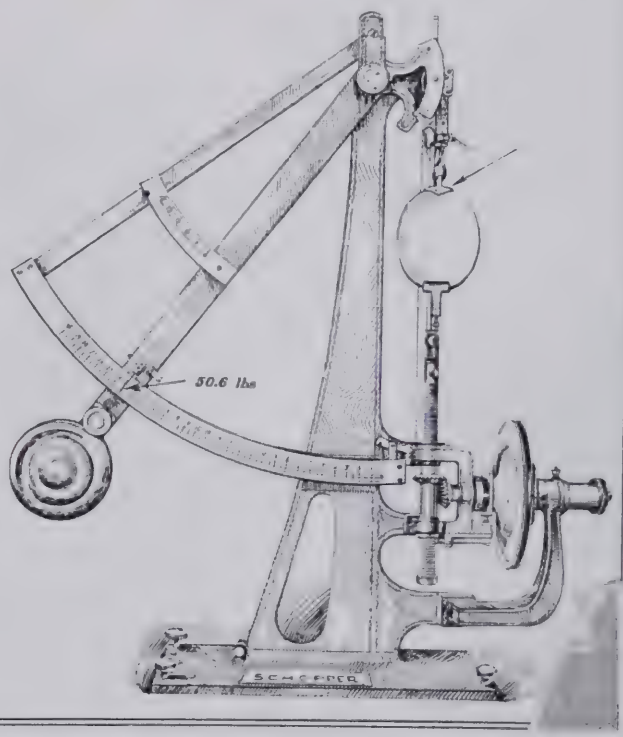
Gentlemen:

We have made a series of careful tests to determine the breaking strain of the Lenstick cement used to unite the metal pieces to the glass lenses. Our final results were obtained on the Schopper tester, a device in which the article to be tested is put into the machine, power applied and a weighted lever lifted along a graduated arc. When the break occurs, the number of kilos, or pounds, is read directly on the graduated arc. We were able to reproduce results of the following order with the utmost ease: 48.4 lbs. - 46.2 lbs. - 55 lbs.

Our mechanical engineers assure us that this particular testing device is more reliable than any extemporized way of hanging weights on the suspended article. We therefore give you the figures obtained on this machine, which is in daily use with us for testing tensile strengths.

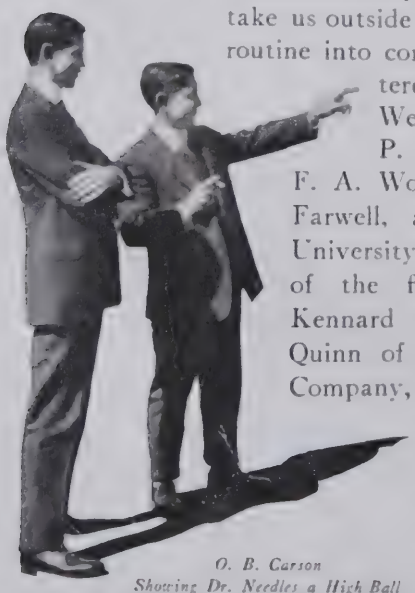
Respectfully submitted,
ARTHUR D. LITTLE, INC.
By Chas E. Swett

Arthur D. Little is one of the most widely known chemical engineers in the United States. Of him the March *System* says, "He made an analysis of the German Coal Tar Industry before the National Chamber of Commerce, which cleared many misconceptions and pointed out how America can utilize industrial waste."



Southbridge Notes: From Soup to Nutts

We have been favored recently with visits that take us outside the dull pale of routine into cordial personal interest in the visitors. We refer to Prof. J. P. C. Southall, Dr. F. A. Woll, Prof. H. W. Farwell, all of Columbia University, and B. W. Nutt of the firm of Strong, Kennard & Nutt, I. W. Quinn of R. H. Macy & Company, New York, and Dr. Wm. B. Needles of Kansas City. B. W. Nutt we attempted to trim on the local alleys, but the S. K. N. Demonstrator even, two strings apiece; occasionally hear a pin drop!



O. B. Carson
Showing Dr. Needles a High Ball

After a long tour through our factory we induced Prof. Southall to address the department heads and employees, which meeting was attended by approximately one hundred. Dr. Woll also spoke on the evolution of the eye, but the general talk centered around the great opportunities opening up in the profession.

Dr. Needles is our most recent visitor, coming to us from Springfield, Mass., where he addressed seventy-five members of the Massachusetts State Optometrical Society. From long acquaintance we were able to dispense with formalities and take Dr. Needles on a rambling tour of the factory, during which you see O. B. Carson pointing out to him our new ball field from the factory roof. He concluded his day's visit with a lecture to our employees.

Amoptico

Reg. in U. S. Pat. Off.

Vol. IV May, 1915 No. 2

Published Monthly by
American Optical Company
1833-1915

Channing M. Wells, President — Albert B. Wells, Treasurer
J. Cheney Wells, Vice-President and Secretary

General Offices and Works
Southbridge, Massachusetts, U. S. A.

New York 15 Maiden Lane
Chicago 5 S. Wabash Avenue
San Francisco . . . 140 Geary Street
European Agency,
American Optical Company, Limited
39 Hatton Garden, London, E. C.
Cable Address: Amoptico, Boston
Western Union Code used

Manufacturers

Spectacle and Eyeglass Frames, Mountings and Material, Eyeglass Chains, Automatic Eyeglass Holders, Trial Sets, Trial Frames and Accessories, Automobile Goggles, Lenses, Spectacle, Eyeglass and Goggle Cases, Optical Machinery, Tools and Supplies, Etc.

Copyright, 1915, by American Optical Co.
Permission to reprint articles granted on request

Why Worry?

SO many of us lay too much stress on what the other fellow is doing, instead of going right at our own little wood-pile and sawing to beat the cars. If a new man opens a shop up the street, why get into a state of panic? Isn't it a pretty good sign that there is good business in sight. It usually works out that way too. Don't spend your time between worrying and predicting to your customers how long the new arrival will hold out. Get a broader slant on the real facts. Several optical shops quite near one another make an optical center, figuratively speaking of course. Ever notice how the automobile concerns accumulate in one part of the town? People know that certain localities are centers for optical work; that's good business for the whole bunch. When one or two big optical stores moved off 23rd Street a few years ago and established a new community on 42nd Street, the fellows who were left thought they would have a gold mine. But the wise man changes his mind, and also his location. Tag along with him if you cannot lead the parade. Help him form a new optical center and grow with him. It's good business for both.

Don't worry about the other fellow's prices. Very few people go shopping for glasses. If they did you couldn't hope to hold them anyway. If anybody can get $3.00 for a FITS-U mounting you can. Your goods are worth it. Put 50 cents worth of salesmanship behind them and prove it. Any man can sell goods at cut prices. The live, level-headed, thinking man gets the business at a living profit, gives good honest value in service, and merchandise, and holds his customers.

Why worry?

Speaking of Quality

Says our Superintendent at Lensdale:—

"An incident occurred here last week that may interest you.

"We received 3 lots of lenses from customers complaining of the quality. All three complaints were referred to me, and upon investigation I find the lenses were not ours but represented the output of competitors.

"Sometime ago we also had some of a competitors' lenses sent us with the expressed desire to get our opinion as to whether or not they really were the quality lenses claimed for them."

—H. W. Hill.

We Wish You were Nearer, Australia

Feb. 19, 1915.

American Optical Company,

Gentlemen:—Your very fine catalog arrived safely and accept my sincere thanks for same. I will find it very valuable. It is the most beautiful thing I have ever seen in the shape of a catalog. I imagine it cost a large sum to compile it complete with all its photographs. However, it does a firm a great credit to be in the position to give such to its clients. Personally, I have found your goods and tools perfection, and I can't say more than that.

I have been a practical man for sixteen years and know something of Optical tools. Hope some day to have a complete set of AOCo machinery.

Thanking you again and wishing you great prosperity, I remain

Yours truly,

Signed—Cecil H. Thomas,
Melbourne, Australia.

Yes! But What if HE Could Speak?

Gentlemen:—

Our AOCo man suits us fine. He certainly gets attention, most of it favorable, *though some make remarks about his complexion.* However, he sells the goods, that is what interests us.

F. H. Gallin,
Meyer Optical Co.,
Stockton, Cal.

Carsonisms:—"Quite an Ovalex Spring we're having!"



Our Painstaking Care with Kryptoks

A FEW weeks ago we had on hand several thousand Flint glass plates about 4 inches square, which were purchased for moulding into Kryptok buttons. They had, however, been laid one side because the refractive index of the lot was rather mixed: in fact by preliminary tests on several dozen of them it was found that the index ranged from 1.616 to 1.620. However, it was figured out that it would be worth while to test all these plates singly and sort them out so that special curves could be put upon them and our Kryptok Blanks would be correct. Accordingly, these plates were all surfaced on one side and had one edge ground and polished and were then all tested correct to the fourth place of decimals and sorted out into their respective numbers.

As you can imagine, this had been a painstaking job, as the surfacing and edging of the plates has not been of any assistance towards the final production of the Kryptoks, because the plates have to be cut up and moulded into little buttons. However, as each plate makes several buttons and the Scientific Department has already passed on some 2,200 plates, you might think that we have accumulated a large stock of this Flint, but as a matter of fact, it will (because our Kryptok business has grown to such a magnitude) only last us a few weeks at the outside.

The point of all of which is that we, as manufacturers of Kryptoks, will go to great trouble and expense to guarantee Kryptok accuracy.



Lenses $1.50 per set with Card No. 18W2

New Kryptok Display Card

The above facts being true, the best guarantee of success in selling Kryptoks lies in the AOCo. monogram on this brand new orange and black display card we're putting out. The card is made of beautiful, heavy stock with spaces into which the lenses may be inserted. Let this card help you sell part of those 1,000,000 Kryptoks in 1915. Complete set of demonstrating lenses, with card, $1.50.

When We Tell You That Lizard Grain Cases Captured

THE trade, not only here but particularly abroad, you will be convinced, will you not, of its superior merits and our optimistic forecast?

The beautiful illustration does not exaggerate its appearance one whit, but it fails to reveal the qualities of hard wear, sturdy construction and superior vulcanizing process of mounting the leather that makes it well-nigh equal to genuine lizard. Our new rust-proof cement holds the leather to the case with tremendously strong adhesive power. No skiving of edges is necessary.



We are ready to supply this grain in our Watergrain and Vicar lines.

AOCo TRIAL SETS

AOCo Trial Set No. 2631



WHEN a Company has made trial sets for 25 years and has succeeded in bringing them to such a point of excellence as to make them the world's standard, it is pretty good proof of their reliability and quality.

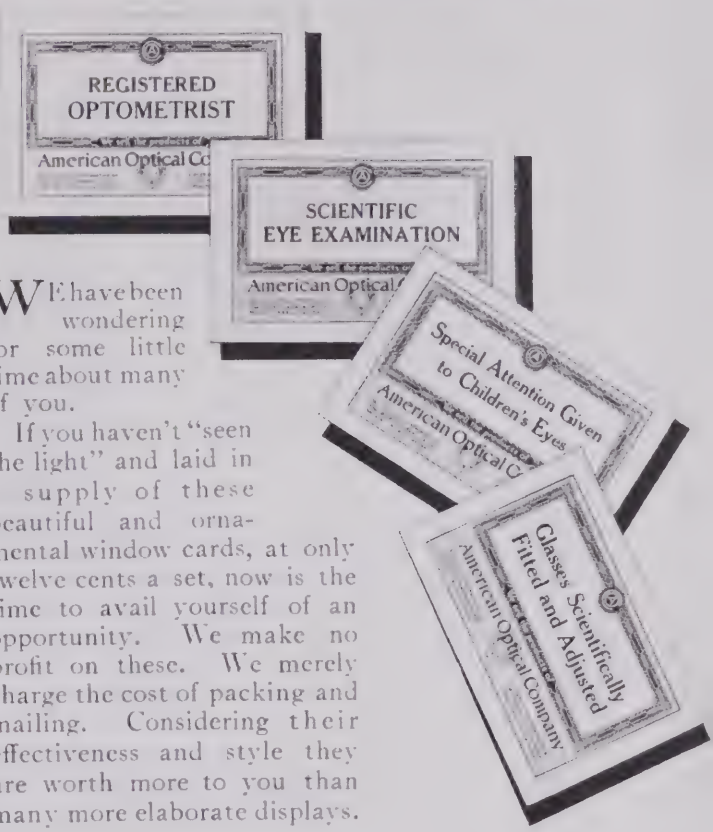
Illustrated above is one of the traveling style sets that has helped to build our reputation.

It is No. 2631, with contents "D": 35 pairs sphericals, 21 pairs cylinders, 7½ pairs prisms, 18 disks and colored glasses, one 3 cell and one single cell trial frame.

The case is covered with fine quality black or tan leather as desired. Lined with velvet. Space underneath tray where stock may be kept.

This style case may be had with a number of different contents

Have You These Business Getters Yet?



WE have been wondering for some little time about many of you.

If you haven't "seen the light" and laid in a supply of these beautiful and ornamental window cards, at only twelve cents a set, now is the time to avail yourself of an opportunity. We make no profit on these. We merely charge the cost of packing and mailing. Considering their effectiveness and style they are worth more to you than many more elaborate displays.

No. 17D4.

SEND YOUR NAME IN NOW!

FOR our New Machinery Catalogue, which is to be issued shortly, and we will send you one, when it appears.

Name *Street*

City *State*

(*Continued from p. 36.*)

on the effect of the ultra-violet rays upon different portions of the eye, but a great deal more work in this direction yet requires to be done. As far as it has gone, however, the effects of ultra-violet rays on the eye can be summarized as follows:

Part of them get through the crystalline lens and impede vision as well as eventually destroy the lens. Another part acts on the mucous membrane forming electric ophthalmia. Doubtless these are some of the symptoms which you have noticed and as far as we can see at present these symptoms can only be attributed to the excessive amount of ultra-violet radiation from these highly heated metallic filaments. The only remedy that we can suggest for this is for the patient to wear some kind of glass that will cut off these ultra-violet rays.

NOTE:—The very best glass that we can recommend for the purpose is our new Sir Wm. Crookes Glass. This is a pale neutral tinted glass, so pale that one can hardly tell it from white glass on the face in fact the difference is only visible after a very careful examination. It, however, possesses the wonderful property of excluding all these harmful ultra-violet rays, and the wearer can see all colors just as they are seen through white glass; in fact, this Crookes glass only shuts out more light than white glass of the same thickness.



Winfield S. Brown Uses Luxfel Idea Attractively

AMONG the most attractive window displays which have come to our notice is the Luxfel window display arranged by Brown Bros. of Manchester, N. H. The illustration shows the general effect of the display, but to be fully appreciated it would be necessary to see the display itself.

The base of the window was covered with a light material on which were a number of piles of Luxfel blanks, also several boxes overflowing with Luxfel blanks. In the foreground were arranged ten displays showing the evolution of Luxfel from the materials used in the manufacture, through the moulding, grinding, polishing and mounting up to the completed spectacles. In front of each display was a card briefly describing it: these were placed on a dark crêpe paper background making a very effective contrast. Several large cards placed against easels called particular attention to the benefits of Luxfel lenses. These were printed in colors with the word "Luxfel" standing out in bright red which gave just enough color to the display to make it very attractive. To the right of the window was placed one of the AOCo model men wearing a pair of Luxfel lenses in a Library spectacle and illustrating better than by any other means how attractive Luxfel lenses are when properly fitted.

The display was originally arranged by the Globe Optical Company and was first shown in Boston where it attracted a great deal of attention in an Optometrist's window.

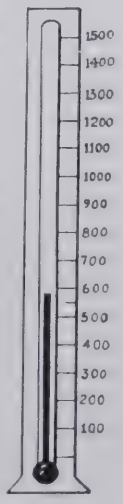
It is planned by the Globe Optical Company, Boston, to loan this display to those in the trade ordering a reasonable quantity of Luxfel blanks and lenses, who have facilities for displaying.

Watch This Rise Over His Head!

SALES on Sir 17M30 have now reached 580. Last month it was 550. This only shows how a display of merit will "take." Another dealer (see editorial page) writes that it's fine, but that people "kid" about its complexion. Once more we call attention to the fact that as long as they talk he's selling goods for you. Watch this thermometer rise over his head. Ask your jobber to get you this silent salesman for $7.50 F.O.B. Southbridge. A set of cards with every model man. Order by No. 17M30.



(Patent Pending)



You "No Catchum?" WE Catchit!

St. Helena, Cal.,
April 12, 1915.

Gentlemen:—On March 30th I asked you to send me one of those AOCo Crest signs described in March AMOPTICO, but "no catchum" yet. Please "look see" why, and let me know, or else send one in and oblige.

(Signed) H. S. MACLACHLAN.

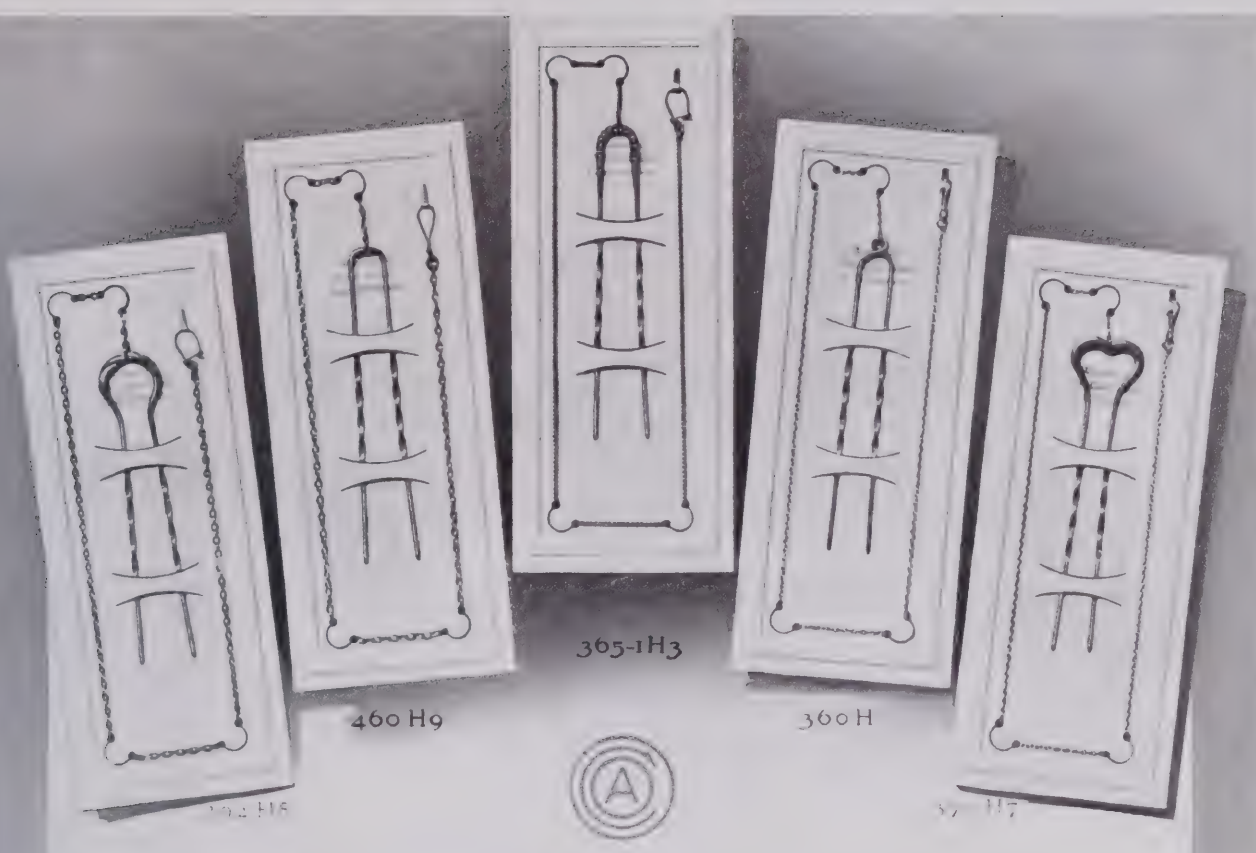
Chester, Ill.,
Feb. 14, 1915.

Gentlemen:—I received your Large, Clean and Instructive Catalog. Thank you very much.

The Catalog is a Masterpiece, and modern to the last tap.

Yours very truly,

(Signed) ALBERT E. FRITZE, M.D.



In the Hot and Windy Days to Come



A. L. HUGHES will carry the AMERICAN OPTICAL COMPANY'S New Chain Line to the wholesale trade that has known him so favorably for seven years.

In taking charge of the sales end of the eyeglass holder and chain department he will bring AO quality and the service that has characterized his entire road experience.

Our chain department is operated as a separate unit in this factory, thus ensuring the best elements of manufacture and quick service to the trade in the future.

We take pleasure in introducing our Mr. Hughes and his famous smile. Wait for him!



"Motorists in Vogue Glasses Represent the Most Discriminating Public"

Motorglasses of Quality That Will Kilglare By Night or By Day



"An ounce of quality's worth a pound of gold"

Amoptico

Published by the American Optical Company
at Southbridge, Massachusetts

Vol. IV June, 1915 No. 3



Every Detail in the Ovalex Fits-U

Is so close to perfection that we have built up a national reputation on Fits-U Style, Strength and Simplicity.

Our constant aim is perfection and the Fits-U Ovalex is evidence of eighty years' untiring, forward-looking effort towards absolute excellence. The hard-won leadership thus achieved has never been relinquished, and constitutes an obligation to continue the Service rendered in the past.

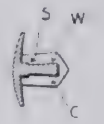


KeeLocK—"*The Interlocking Cemented Strap*



(Patented July 16, 1912. Other Pats. Pend.)

STRENGTH—or holding power, is achieved by several radical features. The Key, or wedge, is slid into the rectangular slot, the cement locks itself solidly behind, above and below the wedge (W) and in front of the shoulder (W), hence KeeLocK. It cannot be pulled out. The shoulder also holds the strap in rigid alignment. It is particularly notable that a maximum of cement-adhering surface and the dovetailing idea of wedge-and-cement provides for absolute lens security and firmness.



No. 4

S = Shoulder
W = Wedge, or Key
C = Lenstick Cement

SIMPLICITY—The entire mounting is simple in operation and appearance. Lenses are centered and slotted, at the rate of three or more per minute, to an adjusted depth. The strap wings and wedge are made in one solid piece. It is then short work to slip the Lenstick into both slot and strap, warm and bring together. The strap, with its shoulder settles unerringly into proper alignment.

But the superlative feature of the KeeLocK cemented mounting is its *combination* of the best in others with the addition of some radically new and permanent improvements. Style and security are at last obtained in one mounting. And it is adaptable to your old drilled lens stock.



FIG. 1

STYLE—of course is a question of individual taste and preference. KeeLocK represents our collective effort to meet the individual taste as closely as possible. To date, those who have passed judgment on this new mounting have expressed nothing but delight with it. Its beveled facets are ultra-fashionable.

We presume this is because KeeLocK was designed by an artist who appreciated the invaluable assistance rendered by beauty and style in the sale of a mounting.

INCONSPICUOUSNESS—In relation to other styles and the size of the lens itself KeeLocK is practically imperceptible. The beveled edges heighten this effect, as one edge is constantly in the shadow while the other is exposed. Furthermore, by using the inside of the lens for cement, rather than its surfaces alone, it has been made possible to reduce the KeeLocK strap still smaller than in prevailing styles.



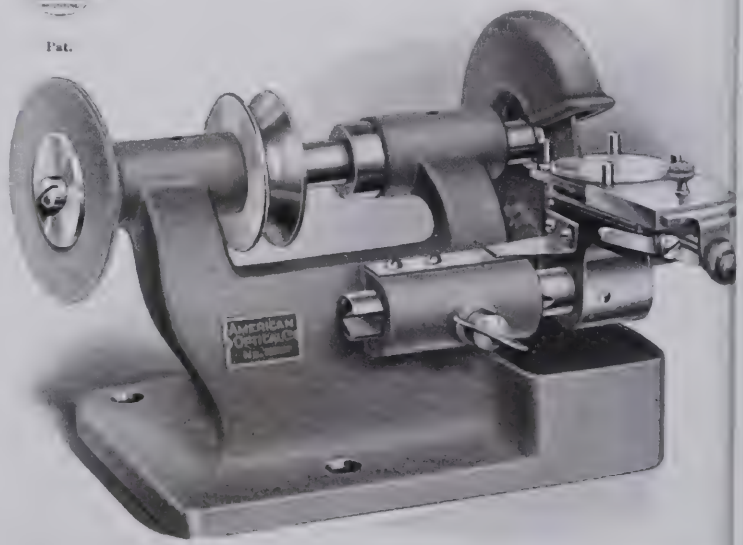
This fashionably superior mounting has met with pronounced success. The KeeLocK's combination of superlative qualities has aroused trade wide interest. Ask your jobber to tell you about it.

The expense of a KeeLocK slotting machine and accessories is only nominal when you consider you are not *speculating*, but *investing* in a big cement strap development.

Cat. No.		*Price*
M 88b	KeeLocK Lens Slotting Machine, belt driven,	$20.00
M 89m	KeeLocK Lens Slotting Machine, motor driven,	25.00

KeeLocK

Pat.



Patent Applied For) *M88b* *Slotting Machine*

Amoptico



The Story of the Master Lenses

THE objective method of testing for defects of vision was the natural outgrowth of the lack of facilities which hampered the early optician, but it is one that has been developed to such a high degree of refinement since that time that there appears to be little doubt as to the permanence of its position as the chief aid of the busy optometrist.

Undoubtedly, a very substantial percentage of all the optical prescription work done in this country today has as its basis the trial set, and an equally large fraction of all practicing oculists and optometrists look upon the trial set as an indispensable part of their equipment.

No Reliable Sets Previous to 1800

It is of interest to note that prior to 1890, there were practically no reliable trial sets manufactured in this country. In fact, the medical and optometrical professions took particular satisfaction in the possession of an "imported" trial set. Most of these imported sets were made by A. Nachet, of Paris, and the standards of accuracy of their contents, while taken for granted at that time, would hardly be considered for a moment today.

The First American Made Sets

Realizing that much depended upon the establishment of reliable standards in lens manufacture, the American Optical Company undertook to produce American made trial sets, which immediately gained favor for their accurate and systematic focal systems as well as their uniform exactness and interchangeability with American trial frames.

The Eclipse of Foreign Trial Sets

Not only this, but the general excellence in the construction of the cases themselves, and the wide range of styles offered, totally eclipsed the foreign cases and brought about an entire reversal of the former conditions. The foreign makes were no longer accepted in this country, and the American Optical Company cases soon enjoyed a wide sale. Shortly after, through the sale of some of these cases to our European customers, we began to develop a large foreign demand in England and on the Continent, despite the persistence of imitators of our styles and catalogue numbers.

Foreign Governments Endorsed AOCo Sets

American Optical Company Trial Sets and Trial Frames are sold today the world over. European governments have given them high official standing, outclassing other makers in their own fields. The United States Army, Navy and Hospital Service are large users, and, in fact, this line has added great prestige to the AOCo name and trade mark wherever optical wares are sold. Many AO Company trial sets are sold annually to supply a world's demand for dependable trial lenses.

Lenses the Prime Consideration

Naturally, the lenses are of prime importance—they are the trial set itself, and neither the style nor the fine finish of the container which holds them can add anything to their value for practical purposes. But it does make a great deal of difference to the optician to have them all arranged in such a manner that the necessary lens of any class may be immediately located.

Lens Manufacture on a Vast Scale

To come back to the lenses, it will be apparent that their manufacture is not alone an industry in itself but a very large and important one, as may well be judged from the views and description of the Lensdale plant which have appeared frequently, and the photograph of the new building which adorns the cover of the present issue. An attempt has previously been made to give a general idea of the numerous special processes of lens manufacturing as carried out on a tre-

"None of you so mean and base that hath not noble lustre in your eyes"—Shakespeare.



No. 2071

mendous scale involving the production of many thousand of finished lenses annually.

Much is known by the trade about the many particular operations necessary to the completion of even the commonest forms of Centex spectacle lenses; it will be at once apparent that this applies with far greater force to the manufacture of what are really Master Lenses—the lenses of the trial set.

The Care of the Master Lens

It must not be understood from this that any different or any more painstaking methods of operation are employed in the manufacture of the Master Lenses for trial sets than are followed in the manufacturing of lenses for regular use, but the inspection and testing of trial set lenses is naturally exacting in the extreme. The slightest error of curvature or the merest imperfection—probably invisible to any but the most expert inspector—is sufficient to condemn them for this purpose. An error in the Master Lens might apparently magnify or correspondingly diminish the extent of the correction required in certain cases and thus render the refractionist's work altogether abortive.



No. 2041

Accuracy a Cardinal Principle

Too much cannot be said regarding the importance of securing the highest degree of accuracy in the lenses, and unremitting attention to the upholding of the AOCo standards in this respect has been responsible for the reputation which AOCo Trial Sets have achieved.

Trial lenses are made in two sizes, measuring exactly 36.3 mm and 31.5 mm in diameter. For convenience in referring to them, they are designated simply as 36 mm and 32 mm respectively. The trial rings measure 37.6 mm and 32.8 mm and for the same reason are known as 38 mm and 33 mm. Owing to the greater accuracy of measurement as well as convenience of reference that it permits, the metric system is used by the American Optical Company in the manufacture of trial lenses and accessories and found an advantage by the optometrist. In the catalogue covering this line, known as "Opticians' Trial Sets, Trial Frames and Accessories," the diameter of the trial rings is denoted by their respective catalogue numbers, making it unnecessary to state the size when referring to them.

Refraction By Rule of Thumb

Up to ten or fifteen years ago, it was customary to test for the commoner defects of vision alone and the trial set was accordingly a simple affair. It usually consisted of nothing but sphericals, such as "Contents 'L'" as listed in the catalogue above mentioned. This contains 24 pairs each of sphericals in concave and convex, ranging from 0.25 to 8.00 with Trial Frame 2220.

Modern Scientific Refracting

Contrast this with what is now considered necessary in a trial set to meet every need of the up-to-date refractionist. As an instance of this "Contents 'E'" may be cited. This consists of no less than 40 pairs each of concave and convex sphericals ranging from 0.12 to 20.00: 24 pairs each concave and convex cylinders, ranging from 0.12 to 8.00, and 8½ pairs of prisms, one each 0.50, 1, 2, 3 and 4, and two each, 5, 6, 8, 10, 12, 15 and 20. In addition to the foregoing, there are 23 disks and colored glasses, as follows: one blank, two each pinhole, stenopeic, cross-lines: one each white, red and blue shades, 2, 4, and 6, smoke shades, 1, 2, 3, 4, 5 and 6, frosted, half frosted, Maddox prism, Maddox rod and chromatic test, with Trial Frames No. 2387 B, Wells temple, and No. 2220, and one set of test types.

Great Range in Choice Possible

Between these two extremes, it will be evident that the selection possible is so great as not to permit of detailed description outside of a catalogue, many of the sets only differing in the range of the various classes of test lenses. For example, "Contents 'I'" comprise but six pairs each concave and convex sphericals and six pairs each concave and convex cylinders, with five disks and colored glasses and one three-cell trial frame, the number of lenses employed frequently depending upon whether the trial set is intended for office use, or is to be carried in a traveling case.

Scope of Regular Listed Sets

Regular sets are listed having 14 pairs of sphericals with 9 pairs of cylinders: 20 pairs of sphericals with 11 pairs of cylinders and 4½ pairs of prisms: 28 pairs of sphericals and 17 pairs of cylinders, with 4 pairs of prisms: 30 pairs of sphericals and 18 pairs of cylinders, 5½ pairs prisms: 32 pairs of sphericals and 20 pairs of cylinders, 5 pairs prisms: 35 pairs of sphericals and 21 pairs of cylinders, 7½ pairs prisms, also 40 pairs of



No. 2901

spherical and 24 pairs of cylinders, 8½ pairs prisms, with disks and trial frames to correspond in each instance.

Special Trial Sets

In addition to these, there are several special sets, such as prism sets, "Contents 'K'" consisting of 10 pairs of prisms, either square or round; also bifocal sets and the like.

Forty Different Styles in All

In all about forty different styles of trial sets are listed, and with our facilities for manufacturing, orders may be filled at short notice, many of the more staple assortments being carried in stock. Where none of those listed meet the requirements, special sets will be made to order, but it will be evident that orders for regular styles can be filled most promptly, as a trial set with a special assortment of lenses, or requiring a specially constructed case, must be made from beginning to end.

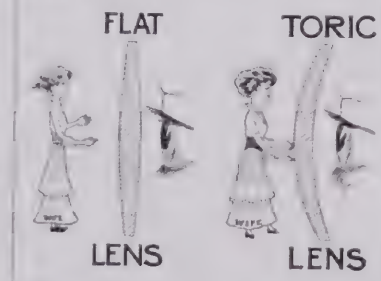
It will be noted that the sets regularly listed have been selected with a view to meeting every possible requirement, in order to avoid the necessity of ordering special sets. This is because the specification of even a single pair of lenses differing from that of the regular assortment of foci, involves the making of new focus strips, or a specially constructed case and tray, and accordingly adds materially to the cost.

Trial Frames Next in Importance

Next in importance to the Master Lenses themselves come the trial frames on which the AOCo holds or controls many patents. They possess numerous exclusive features of interest and are made in a number of different styles. Their intricacies and varieties are well known to the profession.

In fact the theoretical and practical requirements for Master Lenses and Trial frames have now become so perfected that the modern oculist or optometrist now orders his Trial Set with an eye largely to the style of the trial case. He realizes that his Trial Set should add to the looks and atmosphere of his office. His case, in beautiful natural woods, or ivory white now tends to reflect an atmosphere in keeping with the professional services he renders. The styles in Trial Cases will eventually be as varied and adaptable to individual needs as are the Trial Sets and Frames today.

It All Depends on Your Lenses, Boys! Some still prefer the flat at that!



"They All Look Good Thro' Torics"

Try Our High Quality 1.523 Index

While the American Optical Company has in the past supplied very high grade 1.507 index glass of unvarying quality and while this too is very well known all over the country, it does not as yet seem to be so well known that we are also able to supply a 1.523 index glass of an equally high quality. Until recent years our glass manufacturers seemed to think that this glass could not be produced unless it had some tint to it and these tints, when the blanks were looked at edgewise, seemed either of a greyish color or else a green tint like bottle glass. However, after a great many experiments and much labor and time these difficulties were overcome and the glass has now been satisfactorily produced with a constant refractive index; the color, as we stated before, cannot be distinguished from that of the 1.507 glass. The refractive index, of course, was not the only property to be thought of: the glass has had numerous and exhaustive tests as to its durability, its hardness for scratch resisting, fusibility, expansion-coefficient, dispersion and other properties.

Our 1.523 Index glass is made for us by the same concern that for so many years has furnished us the 1.507 index glass of enviable repute. It is manufactured by the great firm, Chance Bros. & Co., Ltd. The American Optical Company is extremely fortunate in having an uninterrupted source of supply for optical glass of both indices.

Consequently, jobbers will be glad to know that they can still obtain an undiminished supply of lenses or blanks of 1.523 index, superior as regards color to that which they previously obtained.

Fits-U Lens Cleaners De Luxe

Subsequent to the announcement of an addition to our Dealers Helps — Fits-U Lens Cleaners — our service department was literally swamped with orders for this popular form of advertising.

The value of distributing Fits-U Cleaners can not be overestimated. They are a lasting reminder of your service and location.

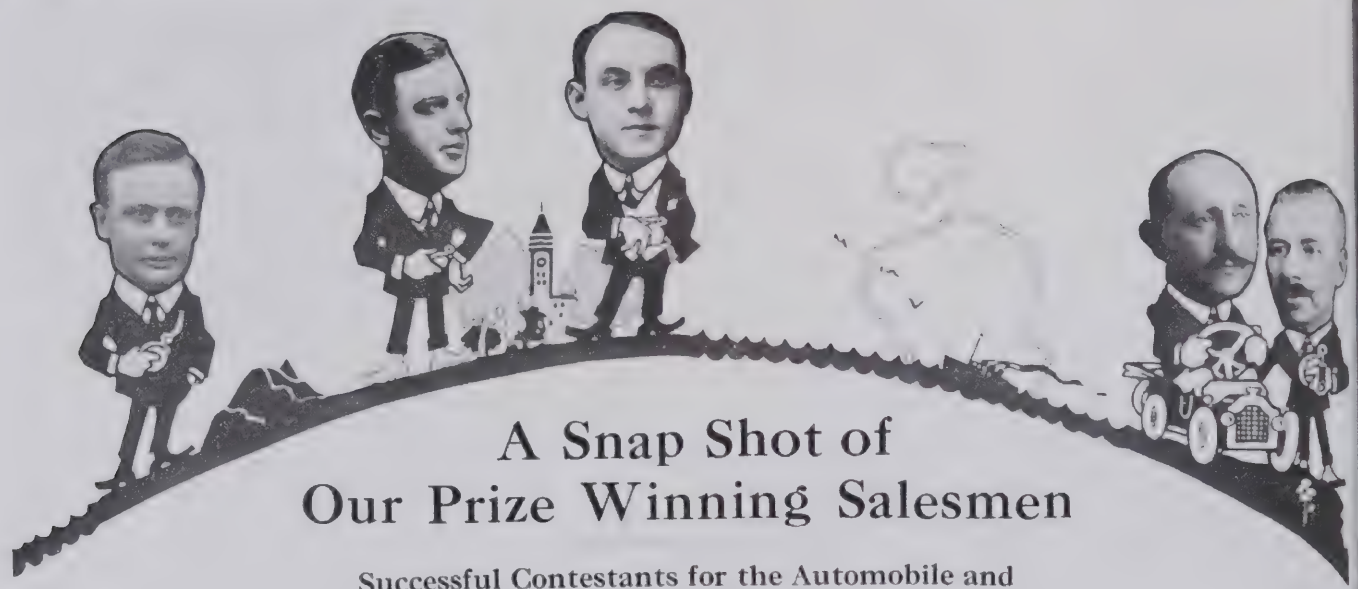
The material from which Fits-U Lens Cleaners are made is especially suitable for the purpose. They will clean quickly without injuring the lens. They are furnished plain with imprint or with illustrations and appropriate copy exploiting your service or the merits of Toric Lenses, etc.

Order through your jobber or send remittance direct to Dealers' Service Department. $7.50 per thousand. No orders accepted for quantities less than 500. Send for samples.

Announcements

Where gross prices are quoted on our goods, orders for smaller quantities are considered subject to a proportionate increased price.

Our Colored Set Goods can now be ordered from stock.



A Snap Shot of Our Prize Winning Salesmen

Successful Contestants for the Automobile and Watches Presented by the Rice Leaders of the World Association

WHITTLE up your Eberhard Fabers, scratch like a competitor's emery and get up something nifty and neat for AMOPTICO about this Rice Leaders of the World Sales Contest" said the Ad manager. And there you have the King's English—so simple and yet so full of meaning; direct and yet so subtle. We are given free rein to call on Shakespeare or Elwood E. Rice himself. The sky's the limit! Happy is the day thereof, thereit!

So your House Organ Grinder beats it up into the attic, pulls out the old music box and gives her a preliminary crank to find out "Whoosoo" in AO Sales Circles.

The first tune, all monkeying aside, sings the praises of the Rice Eaters* of the World Association. So does the last, but on the "upper crust" above you are now allowed to see five AOCo leading Salesmen of the World. See them? They are standing alert and erect in the precise geographical positions from which they covered the world and got away with the prizes.

All except J. P. Petherick, manager in London. He is given the express privilege by Mr. Rice of sitting down, because he won the Grand Prize of a $1050 Overland automobile. If the others sat 'n their prizes there'd be a serious disorganization and the Elgin works would go to smash.

Close up to Mr. Petherick you see an old time AO favorite, "Jock" (Arnold) Moseley of the London office, who pressed the Manager so hard we gave him a $200 Elgin Watch of Special design and promised him a ride in the "hoitomobile." This is two points for England and one way of putting our "Made in America" products "across" on the other side. Some record this, for office organization and achievement in the face of untold difficulties, to be the leading salesmen.

Somebody's blowing smoke rings down behind the horizon but we'll now duck that steamship for cowardly reasons and "walk" across those pineapple spikes to New York. John H. Bohling, he of the patent leather hair and manager of our New York office, greets us by the waterside while into his chambered nautilus we whisper the watchword "Elgin" and press a tarnish-proof $200 Elgin of same design into his moist palm. "Jack" landed in third place, but that's to his credit when pawnshops are so handy to $200 gold watches. Yea, bo!

Next! The fellow with the old maid's elbow and the large white Walkovers is the second prize winner, Frank N. Kreissl, our Chicago manager. He is depicted as taking his honors modestly, but wondering why Elwood, when he presented him with the watch, forgot the chain? But leave it to Frank; he knows the jewelry trade.

Aha! there's A. C. Smalley, fourth prizer with a varsity ribbon on his watch. "Jack" has a sensitive stomach, and here we note his peculiar habit of telling time by this simple and humane method. That pile to his left may be taken either for radium, gold receipts or the Rockies. He's getting the business anyway, for California knows a Man, as well as a few other things.

We now play our last tune to these "Upper Crusters" of our sales staff and all other AO representatives in the great International Sales Classic who ran true to form throughout the whole course, but were nosed out narrowly at the finish.

*Leaders.

We Knew You Would Recognize a Good Value

Our Eyedeal Motorglass, model No. 8056, is one of the most advanced styles and best values marketed for some time.

We designed this style to include a combination of distinctive qualities with an extraordinarily low price; this has been our aim for some time.

The Eyedeal first satisfies the demand of the buying public for style. The same features, such as the Zylonite fronts and gold-plated screens and temples, give this Motorglass strength and elasticity of construction—likewise a style all its own.

The wholesaler's or dealer's first consideration—that of construction—is satisfied by the following merits. For instance, the lenses are of selected Mi-Coquille Amber, Fieuzal or Smoke, according to choice. The gold-plated screens are light and yet capable of standing the rough-and-tumble wear that a Motorglass must undergo. The screens are of a fine mesh calculated to keep out dust and dirt and yet let through sufficient ventilation. They are attached to the fronts with our new patented invisible clincher hinged joint. The temples are made of durable, heavy cable wire which conforms easily to the ears. The bridge is inset, so that the eyelashes will not touch the lenses.



Patent Allowed

No. 8056

The public and trade question of price is disposed of by the extremely reasonable prices of $1.75 to $2.00 per pair at retail, and $12.00 per dozen to the trade.

We feel perfectly assured that you will recognize the peculiar excellence of style and structure in this Eyedeal Motorglass from actual usage. Where can you find a combination of such qualities at so low a price?

We are relying on excellent service to expedite the sale of this most unusual proposition, which bears the additional attractiveness of including a beautiful gray lined Japtol Enamel Case No. 1357.

Our Own Little Houdini Gets Out of Chains and Holders

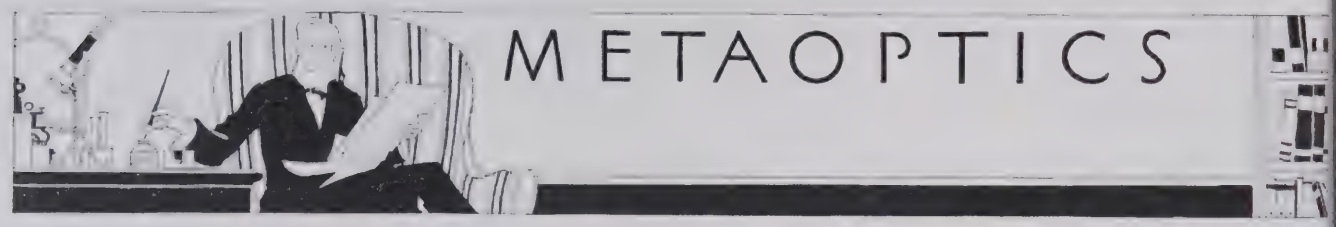
"Al" E. Hughes has girded himself about forthwith with eyeglass chains and holders and sallied forth to meet the wholesale trade.

Some fertile minded reporter recently consigned "Al" Hughes, our chief chain salesman, to an abandoned farm, where he was to be left high and dry, according to Hoyle, to work out the rest of his earthly existence. Now, our A. B. Wells has resurrected an abandoned farm up here and planted a half million, more or less, little pine trees, etc., but Julius Dresser, Esq., is chief plower there! "Al" is only permitted to look.

Therefore, for the benefit of posterity and agriculture be it known that "Al" came here primarily to take our eyeglass holder and chain line, to renovate it and disappear in the direction of the wholesale trade. So "Al" shook the sods from his feet May 10th, gave the new perambulator one last fond push and a "Coo" and disappeared over the hill with his expense book.

Our president said "Go West, Young Man." To date the West has lined up magnificently to welcome our experienced farmer, father and salesman with chain orders. Which all goes to prove that a farmer can get away with it just as cleverly as the fellow that invented him—provided he has AOCo Quality to introduce him properly.





METAOPTICS

NOTE: *This is the second of a series of articles, each one complete in itself, but the whole forming a comprehensive study of the complex nature of light and its properties. H. T. Reeve of our Scientific Staff will endeavor to make these articles simple, and interesting to everybody from month to month.*

The *Visible* Spectrum

IN OUR last article we discussed light as a form of wave motion, its speed and the size of the waves and how they act.

We mentioned that the reason why we possessed the power to see colors was because the different waves of light act differently on our eyes. We can put this in another way and say that the speed of vibration, or frequency of the waves, affects our eyes.

We know that if a string is stretched with moderate tension between two fixed points and then plucked apart, it will vibrate more or less rapidly and give a sort of a dull note,—then if we tighten up the string and pluck it again, it will vibrate more rapidly and give a different kind of note,—we call it a higher pitched note. In the same way different forms of light produce different wave lengths and vibrate at different speeds, giving to our eyes a different tone, or, as we call it, color.

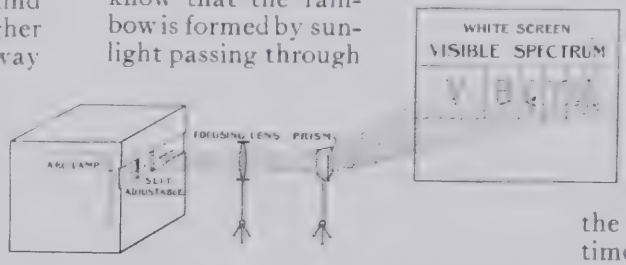
Therefore, we can describe any simple kind of light, either by giving the color sensation which it produces on the eye, or more accurately by stating what its wave length or the frequency of its vibration is. It is by no means an easy matter to measure the wave length of any particular kind of simple light, but once it has been measured the statement of the wave length is an accurate description.

The most extreme red that the eye can detect has a wave length of about thirty-two millionths of an inch; next comes red with about twenty-six millionths; orange twenty-three millionths; yellow twenty-two millionths; green twenty and one-half millionths; peacock blue nineteen millionths; blue eighteen millionths; violet sixteen millionths; extreme violet fourteen and one-half millionths.

In this list of colors you notice that neither white nor black are mentioned, because white is a mixture of all of them and black is simply the absence of all light.

The next thing to consider is how do we know that these colors are obtained from ordinary white light. The answer is that we can analyze the white light and show all the colors and then recombine all the colors again and re-form our white light.

In nature we find the colors sorted out in the rainbow where they stand side by side and we know that the rainbow is formed by sunlight passing through the raindrops, which refract it and in refracting it sort it out into its different colors.



If we take an arc lamp as a miniature sun to give us white light and place a globe of water in the rays, we know that we will get a sort of bow of colors.

Instead of using a globe of water, if we use a three-cornered bottle and put that in our beam of light we get a more brilliantly colored patch on our screen; and if instead of water we fill our three-cornered bottle with certain oils such as turpentine, cinnamon or bisulphide of carbon we get respectively still more brilliant colors.

Naturally, if we find that a three-cornered bottle full of liquid will display this rainbow effect, we would come to the conclusion that a piece of transparent glass of the same shape will do similarly, and so it does; and we arrive at the use of the well known glass prism to produce a spectrum of colors.

The word spectrum means an appearance; in this case an appearance of colors, the colors sorted out in their proper order.

Further, the spectrum produced by a prism is sometimes called the prismatic spectrum. In all cases, one will notice that the order of the colors is the same and that the red light is always refracted least and the violet most. If the refraction of the colors were all equal the prism would not separate them. The difference of the refraction between the most refracted violet and the least refracted red of the visible kinds of light is sometimes called the dispersion of the prism.

These are the great researches that Sir Isaac Newton undertook. He used sunlight streaming through a round hole in a shutter. If we start with his experiments and first try the effect of focusing on the screen the image of the hole by interposing a positive lens and then put our prism in the path of the beam, focused by the lens, we notice that the colors overlap very much near the middle and give a mixed effect. Whereas, when we use a small hole, though we have

It Cuts Fast and Seldom Scratches

DURING the past year we have been supplying an ever increasing amount of our special grade M302½ emery to the trade. The special properties of this grade are its rapid cutting ability and less danger of scratching, from a lens surface striking the iron.



The M302½ is particularly adapted for rapid work in large prescription shops. It is slightly coarser than our regular finishing M303 grade, and cuts much faster. If directions as to running black, or "dead," are followed closely it leaves a beautiful steel blue finish on the lens surface. The directions follow:

"Wash the roughed-out lens blank very carefully to remove every particle of AOCo M 301 emery. With a brush apply AOCo No. M 302 smoothing emery mixed with water to form a paste. Grind very close to the finished thickness, allowing less than 0.1mm of stock for the finishing emery. Toward the end of the smoothing process, work the emery down, applying water drop by drop as necessary, until the emery assumes a dark brown color. Again wash carefully in clear water. Be sure that a uniform surface is obtained before the AOCo No. M 302½ finishing emery is used."

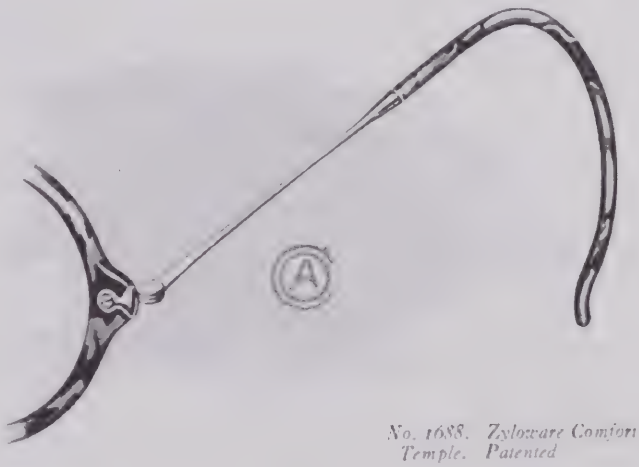
The directions as to working down 302 smoothing emery now apply likewise to the 302½ finishing emery.

It is customary in some shops to omit the use of a smoothing emery. Others still use a manufactured flour of emery for smoothing. We strongly recommend the use of a smoothing emery between the roughing and finishing. A careful test of our 302 under directions will show economy both in time and money when used in place of ordinary flour of emery, regardless of difference in cost.

Every Time You Wag Your Ear

Our stylish, elastic Zylo tip temple stretches itself comfortably. Every time it flaps heavily in the wind old Zylo tip rides serene and smooth till the breeze gives up.

We have this up-to-date innovation in four styles —crystal, light shell, dark shell and amber. The idea is nifty, the tip is a sure 100 to 1 moneymaker and can be attached to any AOCo spectacle frame. Made 6,



No. 1688. Zyloware Comfort Temple. Patented

6½ or 7 inches long. One-half the temple is Zyloware, the other half is either gold, gold-filled or alumnico as desired. Take a tip and write in to your jobber.

(Continued from previous page)

less total light, the colors are more intense, because they overlap less.

Taking this hint and substituting for the small hole a narrow slit—better if it is adjustable—we finally get the colors very pure without any overlapping, and so they are more intense.

So that our improvement on Newton's experiments has led us to the following combination: an arc lamp as our miniature sun, a narrow slit to limit our beam of white light, a lens to focus the image of the slit as a fine white line on the screen, and a prism in the path of the rays of light coming from the lens, which in refracting the light, also splits it up into the various colors of which that white light was composed. This method of forming a visible spectrum is shown diagrammatically.

Newton's great theory that white light was such a mixture of all these colors was for a long time combatted by Goethe, and this great poet and dramatist held that the prism added something to the light and gave it a tint or color of one sort or another; but today no scientific men, even in Germany, hold Goethe's views.

Such then, is the production of the visible spectrum, and in subsequent articles we will extend the analysis of white light to the invisible portions.

Science Alone is Only Half the Tale About Crookes Glass

OUR correspondence reveals, as nothing else could, the intense interest and exhaustive research work now being put into this subject of colored and tinted lenses. This is in itself a wholesome thing, as it will tend to weed out those glasses which have in the past received consideration, but deserve none. On the other hand it will enhance and substantiate the value of those glasses which are founded on a sound scientific basis. We have in mind particularly the Sir William Crookes glass, upon which has been centered an interest and attention such as has never been before attracted to any colored or tinted glass.



A Scientific Foundation Supports It

Today, despite the powerful searchlight centered upon the claims for Sir William Crookes glass, it is still held to represent all that was claimed for it originally, and enjoys the position of a glass founded upon the principles of scientific research and developed by the most modern processes of manufacture.

Analysis of Some Claims Made

It has been claimed for instance, that amber and several other colored lenses shut out more of the ultra-violet rays than does the Crookes glass. They do, but they alter colors, and colored and tinted lenses cannot be compared. Further, by the statement that Sir William Crookes glass cuts out all of the *harmful* ultra-violet rays, i. e., those up to wave length 360 $\mu\mu$, which are the radiations absorbed by the crystalline lens of the eye.

Other glasses, it is true, have been produced for analysis, which show a higher percentage of effectiveness in particular properties, such as the ability to cut out a larger percentage of heat and ultra-violet rays, etc. But these facts have already been known and were originally advanced with the claims for Crookes glass.

Crookes Experiments Revealed This

It was originally stated, for instance, that Sir William Crookes in his famous three hundred experiments, had found several glasses which included a higher percentage of ability to: 1. cut out the ultra-violet; or 2. the heat rays; or 3. let through more visible light, etc. But no one glass combined these three properties.

It was stated that the ideal glass would cut out one hundred per cent of ultra-violet rays, one hundred per cent of heat rays, and let through one hundred per cent of visible light. And it was then pointed out that the possession of any one quality to the highest degree was not sufficient, unless accompanied by a combination of the other desired qualities to a high degree.

Crookes Is a Combination

It was claimed for Crookes glass, therefore, that it combined to the highest degree yet achieved the many desired qualifications for an ideal tinted lens, as a result of which it now has this reputation.

The critics of Crookes glass, therefore, in focusing their attention on one or two properties, lost entire sight of the outstanding fact that a combination of qualities is more desired in a glass than the mere possession of one property to an exceptional degree.

Æsthetic and Commercial Factors Ignored

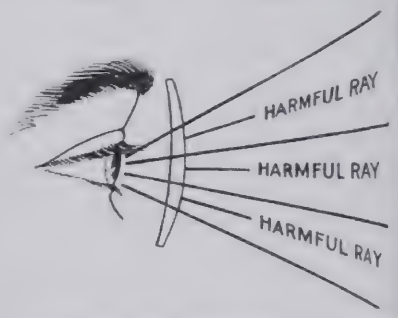
Some scientists have also ignored the æsthetic and commercial factors in the attractiveness and sale of a colored or tinted glass, by giving too close attention to particular properties in a glass.

Importance of Æsthetic Factor—Invisibility

They have forgotten the fact that Sir William Crookes glass in its æsthetic properties carries a tint so imperceptible as to be *invisible*, on the face of the wearer, to all but the eye of the expert observer. This quality of invisibility at once answers one most important objection heretofore raised to all colored and tinted glasses,—namely, the prejudice of the public against wearing a glass that looks unsightly or alters colors.

Crookes Tint Is Evenly Distributed

They have also ignored the *commercial* factor that Sir William Crookes glass can be made in large quantities. It can be made free from striæ and bubbles, and what is also important, it is manufactured so skillfully that the color is distributed evenly throughout the lens. It is thus seen at a glance that a glass from which 80 to 90 per cent of lenses can be obtained successfully, is of far greater advantage than a glass from which only 40 per cent or less of lenses can be obtained. There have been scientific glasses which have had unquestioned merits, but were either too expensive or could not be made in commercial quantities successfully.



Only Beneficial Rays Enter

Satisfies Three Points of View

So that, looking at Crookes glass from its scientific standpoints plus those equally important factors of effectiveness, invisibility, looks and commercial availability, it is seen to be a combination of desired qualities to the highest degree yet attained. In this Scientific, Æsthetic and Commercial sense Crookes glass then has substantiated the original claims made for it and stands as previously claimed, the tinted glass nearest the ideal yet produced.

Crookes is Beyond Argumentation

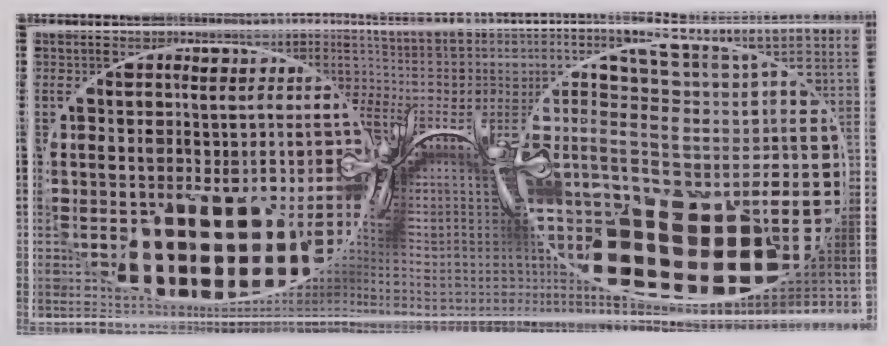
We feel that Crookes glass is now well beyond the argumentative stage. We now advocate a trial. Try it on yourself before you attempt to persuade others. You will be convinced by its soothing, restful effect. We make no extravagant claims. Our statements are subject to test and susceptible of proof. It is significant that we have yet to hear an objection to Crookes by a disinterested person. One prominent scientist who viewed it solely from the scientific standpoint, admitted that Crookes is the best tinted glass when shown the importance of the æsthetic (invisible) and commercial factors. Let us hear from you.

"This fault in us I find, the error of our eye directs our mind"—Shakespeare.

The Crowning Achievement of a Century's Struggle

For a perfect bi-alliens—ground in e piece of crown s with no divid- line, no color berration and true hthalmic values— s given the world e Onepiece tented) Bifocal s.

The magnificent dy of the hundred ars' effort to over- practical diffi- ties against it pears in our gination with dy of the great elopments in optics.



(Patented Uni-Bifo (Luxe) Reg. European Trade Mark)

At first there did not appear to be any process devised which would do away with such glaring defects as imperfect spherical surfaces, well-defined neutral "zones" having disagreeable prismatic effects between foci, and deep grinding and polishing scratches or grooves.

But after the trial and failure of ingenious methods for years, there finally arose this practical bifocal so literally in a class by itself that we have not yet begun to realize its importance as a lens development.

It combines for the first time six qualities never before in one bifocal:

1. Absolutely no chromatic aberration, 2. Invisibility, 3. Thinner than any other bifocal forms, 4. Two sizes of reading portion available, 5. One side only to be surfaced, and 6. A hard surface of crown glass to resist scratching.

Inspired Common Sense Built Our Gold-Filled Lines

HARK to a few choice thoughts, dear reader, about Quality plus gold-filled lines and one House that keeps them both. ¶Says Andrew Eadie in "Drill Chips":



"Class now in session, we may consider for a moment the strange circumstance of "quality" and its too frequent presence as a suspicious character. In looking through the advertising sections of magazines and trade journals we often come across some startlingly subtle stuff that runs its merry way after this fashion: 'Bull's Bouillon Cubes are made of the choicest products obtainable,' or 'Flivver motor cars are constructed of the best material money can buy.' Turning over a few pages we are confronted with the momentous fact that Kollege-Kut Klothing represents the ultimate and then some, as far as fabrics, workmanship and fashions are concerned.

"Putting gently aside the question of truth, if there be any such question, let us stand up in our Hanans and ask whether these verbal orgies in the realm of superlatives are either interesting or convincing. Hearing no response we ask again: Does the trade come jostling one another up your front steps when you with rare ingenuity bellow through the open door that your goods are the unqualified best—the absolute knee plus ultra? Has anyone, since the foundation of the Ananias Club, been convinced that your goods have the competition backed off into the sagebrush just because you said so in your short, positive monotones? Do the great unwashed hang on your oratory when you are getting red in the face from the fire of your eulogies? Well, not precisely. At least, not any more. The thing simply isn't done since Friend Taurus has come to play such an important part in our social intercourse.

"As intimated up yonder, we could lay hold of all the tin-panny bromides about superexcellent quality but we'd rather tell you something with a meaning all its own."

For instance, we carry one-half million dollars in manufactured gold and gold-filled goods in our vaults constantly. This was once real money converted in our own shops into gold and gold-filled wire. There is no other optical manufacturer who sees the whole gold-filled process go through his own factory from start to finish. What advantages do we gain? We gain every advantage that a complete process enjoys over one that is split up into disconnected units—in smoothness, economy, time, the value of instant inspection, etc. We need depend on none but our own experts for those all-important qualities, color, stiffness, finish, design and output. What is the result? Well, we feel entitled to the use of "Quality"





The Individuality of a Case is All-Important

When you consider that style is now one of the strongest motifs in automobile, clothing and commercial designing of all sorts.

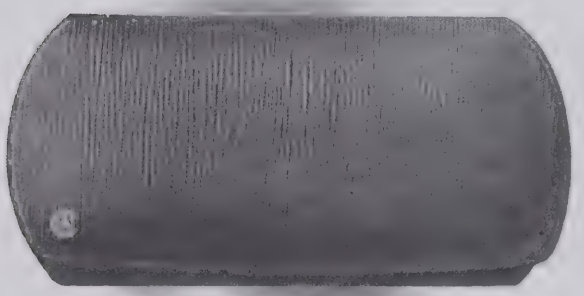
Have you not observed the tremendous and startling changes of style in commodities and advertised luxuries of all sorts of late—their artistic, stylish appeal?

Possibly it has slipped your attention that spectacle and eyeglass cases, for instance, have undergone momentous changes in keeping up with this general progress.

If not, you have then noted how our fashionable



Patented. No. 725. "G" Leather
Showing spring



No. 725. "G" Leather

cases have become thinner and more compact in design. All up-to-date cases have these watch-like advantages, with tight ends and every known covering from genuine French calfs to superb imitation leathers.

The No. 725 "G" leather case shown in the two illustrations above is positively new and the only case of its kind on the market. The form is artistic to the last degree, and made to take a variety of hoop springs drilled above center, and also our non-folding Oxford eyeglass.

Hitherto there has never been a style which would prevent damage by the case-spring to the eyeglass bridge, because the spring was located in the center. By a simple device, whose obviousness only demonstrates more vividly our attention to the simplest details, we are now producing this new style with neatly concealed spring set to the right of center. There is consequently no interference possible now between spring and bridge. We have set a new style with this 725, which carries our finest "G" grain leather and the snappy patented self-closing case.

For Zylo frames the third illustration shows the newest style in a long grain flexible case, reinforced at the bottom to protect the endpieces. The number of this is 2248 Q; the leather is handsome and hard-wearing, buttoning down with a flap for security. The inside is smoothed so as not to mar the shell frames.

In order to accommodate spectacles with large lenses and cable temples we have just completed a third style in polished aluminum cases—No. 378—which is the same size as our No. 377 case but with form varying to accommodate the larger spectacles described above.

Your reputation is safe with AOCo eyeglass and spectacle cases. We have set the styles and others followed. The mechanical and structural excellences of AO cases are now taken for granted where others are subjected to the closest scrutiny.



No. 2248. Q Long Grain

The man who buys AOCo cases nowadays consequently asks for the latest styles, knowing he receives full measure of structural qualities along with it.

"The Egoist is half blind, for he sees with only one 'I'" -P. & S. Critique.

Amoptico

Reg. in U. S. Pat. Off.

Vol. IV June, 1915 No. 3

Published Monthly by
American Optical Company
1833-1915

Channing M. Wells, President — Albert B. Wells, Treasurer
J. Cheney Wells, Vice-President and Secretary

General Offices and Works
Southbridge, Massachusetts, U. S. A.

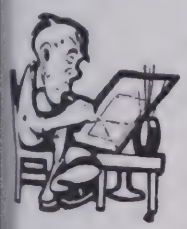
New York . . . 15 Maiden Lane
Chicago . . . 5 S. Wabash Avenue
San Francisco . . . 140 Geary Street
European Agency,
American Optical Company, Limited
39 Hatton Garden, London, E C
Cable Address: Amoptico, Boston
Western Union Code used

Manufacturers

Spectacle and Eyeglass Frames, Mountings and Material, Eyeglass Chains, Automatic Eyeglass Holders, Trial Sets, Trial Frames and Accessories, Motorglasses, Lenses, Spectacle, Eyeglass and Motorglass Cases, Optical Machinery, Tools and Supplies, Etc.

Copyright, 1915, by American Optical Co.
Permission to reprint articles granted on request

The Optical Journal on Our Model Man



It's Omaha correspondence notes that: "E. H. Flitton, *using one of the plaster cast heads that have come to decorate nearly every optical show window in this part of the State*, has arranged a decidedly attractive advertisement of automobile goggles."

Wuxtry! Crookes No. 10F7 Out

The Sir William Crookes Booklet in sepia and white is off the press and ready for distribution to the trade and public.

It is eight-page folder descriptive of Crookes glass contains a beautiful hand-lettered cover with a portrait of the great scientist. Illustrations in rich brown are scattered throughout the booklet and at the end a space for the dealer's imprint is left.

We expect the demand to run well into six figures. So order early by number 10F7. Quantities of 250 and 500 free with imprints. Above that a nominal charge of $2.00 per thousand.

North Dakota Appreciates Bugbee

Christine, N. D.
April 6, 1915.

American Optical Co.,

Gentlemen:—If devotion and enterprise in the interests of the optical profession in North Dakota deserves commendation, then you are rightly entitled to the same.

The coming of your representative, Mr. L. W. Bugbee, to Fargo, N. D., and his scientific address on, "The Theory of Light as Applied to Ophthalmic Optics," was a source of deep gratification to the ophthalmologists, oculists and optometrists of this state.

I am sending a communication to The Keystone concerning this lecture. Believing in the brotherhood of man makes one feel like spreading eastern light, especially such as you diffuse from your laboratories.

Most respectfully,
William Edwards.

First He Says

April 26, 1915.

American Optical Company,

Gentlemen:—I have received the new No. M72 machine, and have had it running several days. I feel that you have brought this machine to a closer degree of perfection than anything I have seen in edging machines. Your lens clamp and adjuster are just about perfect, your weight tension is far superior to the ordinary spring tension, and in my opinion, no equalizer could work as effectively. The convenience of having the formers on the mandrel at all times is not to be overlooked; the hand device is a wonderfully clever arrangement. I can see perfect satisfaction ahead with this machine.

Yours very truly,
Robt. J. Taupert,
Las Vegas, N. M.

Then He Adds

May 5, 1915.

Gentlemen:—I have your favor of May 1st, requesting the use of my letter regarding the M72 automatic edger sent me recently. After the trouble I had with my first machine, I feel that I was in good position to appreciate its faults. The fact that you had remedied these faults in your new one, together with your generous treatment, led me to write you as I did, and I would show very little appreciation if I did not permit you to use the letter, especially as it is pretty generally known throughout this territory that the old machine was not perfectly satisfactory. I purposely delayed writing you that I might prove the work of the machine, and to this date it is giving me the same entire satisfaction.

Yours very truly,
Robt. J. Taupert.

A Boot that Boosts!

May 8, 1915

American Optical Company,

Gentlemen:—I am sure "the boot is on the other foot" and we should thank you for the very fine talk you gave us on tinted lenses. Heretofore, I must admit, I have been somewhat skeptical of the real value of tinted lenses, but you have succeeded in converting me as to the value of Crookes glass especially, and whereas before I have very seldom used any tint in my own private practice I have changed my mind, being thoroughly convinced of their advantage by your practical demonstration. "Seeing is believing," and you have certainly been successful in making me believe. Thanking you for your kind words, I am

Sincerely yours,
Otto G. Haussmann.
Philadelphia

"He that is stricken blind cannot forget the precious treasure of his eyesight lost"—Shakespeare.



Rhode Island Society On The Way to Lensdale. May 25, 1915

The Rhode Islander Always Looks Serious in Pictures

THIRTY members of the Rhode Island State Society of Optometry exposed themselves to the fierce north light of our admiration on Tuesday, May 25th. Our lookout reported the approach of the autos, but said nothing about the ladies.



The Chef saw them, though. Note the devil-may-care, toss-em-around grin on Chef Napoleon's face, don't you? Well these attractive wives and ladies the Society brought with them brought out that human sunshine! They know a chef's the greatest grouch in the world when he has to cook for thirty people.

But here's "Nap" grinning, and later in the luncheon we found him doing the "hot-stove sneakaway," waiting on table and bestowing all those gallant attentions only known to Chivalry and AO hospitality. So the ladies knew they had captured us cuisine and all, and just to prove it, one of them facetiously remarked to us "So we have Napoleon waiting on us? "

Had time permitted we should have danced, for the finely waxed floor of our dining salon brought musical expressions from the fair contingent.

From then on the visit was a foreordained success. President Channing M. Wells welcomed the guests for the Company, following which the visitors repaired to the comfortable library until the tour of inspection began.

We are afraid that owing to delay in some arrivals and consequent enforced shortening of the program, many of our guests were put through a rather severe and rapid strain in covering so much detail in one afternoon. Over sixty distinct rooms on three levels were visited in short order.

Every possible operation was scanned rapidly under the necessity of covering the Main shop and Lensdale in one afternoon, until even the guides whistled for more wind. But not a member dropped out.

Through the maze of offices and corridors, where it is told that an employee was once lost and guided out for 10 cents, the long procession lingered or hurried as its interest dictated.

Consequently, a weary but enthusiastic platoon came up for air and started out across the lawns, and over the bridge to Lensdale. There we caught them, as per picture, while the ladies refused to be snapshotted with their husbands and were made comfortable near by.



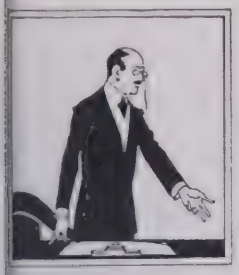
The trip through the Glass Stores room, Blocking, Grinding and Polishing rooms where 100,000 lenses were grinding rhythmically in the vast room was the most magnificent sight of all. The method of putting a lens through its paces and the subsequent inspections and testings in the new Lensdale building were there perfectly visible on a large scale. As much as we have been over this same ground ourselves we never yet cease to marvel at the vast scale and beauty of lens manufacture at Lensdale.

The parties finally broke up into small groups and the last visitors to leave — at six o'clock — had spent their remaining hour in the Machine Shop Exhibition Room where R. L. Gordon and L. W. Bugbee and assistants demonstrated the running models.

Among those present were:



Mr. & Mrs. Thos. H. Tarbox, Pawtucket, R. I.; Mr. and Mrs. Jos. H. Crossley, Pawtucket, R. I.; Mr. & Mrs. Louis Payton, East Providence, R. I.; Miss F G. Rowley, Pawtucket, R I.; Messrs. G. Frederick Beane of Providence, Recording Secretary of the Society; H. P. Warren, Springfield, Mass.; W. J. Davis, Woonsocket, R. I.; Dudley Ward, Providence, R. I.; Louis S. Fellman, Woonsocket; G. H. Wild, Fall River; H. C. Barney, Providence; H. F. Vinal, E. Providence; S. B. Sherman, Providence; J. B. Saunders, Providence; E. A. Bradley, Providence; K. P. Armstrong, Oak Lawn, R. I.; A. J. Lenoir, Providence; L. A. Webster, Boston; J. H. Dockham, Pawtucket; C. W. Blake, Providence; F. A. Fellman, Woonsocket; Dr. H D. Murray, Providence; C. J. Arnold, M. D., Providence; F. S. Harvey, Providence.



PRACTICAL TALKS WITH THE PROFESSION



If you have any problems or questions send them along. This is Your Page.

Puzzling Problem Solved by the 7.50 Base Toric

March 25, 1915.

American Optical Company,

Gentlemen:—We are sending you herewith a pair of toric lenses for examination. Our patient has been wearing regular shape toric lenses and had us get this pair of English shape. He cannot wear these because there is a shadow or reflection of the object looked at just a little above the object. This shadow can be made to come down and meet the object itself by tilting the lenses out at the top about 30 or 40 degrees. The right lens throws the shadow higher than the left.

We have sent these lenses back to our jobbers and they claim these lenses are O.K. in every way. We cannot agree with them, as this shadow is very distinct, especially in looking at a pair of tweezers or something of the kind.

Will you kindly examine these lenses and tell us what, if anything, is wrong with them?

Yours very truly,

April 1, 1915.

Answer: Your valued favor of March 25th duly received together with the lenses you sent us for examination. We have carefully examined the lenses and we find them very good indeed. Good surfaces and true focus.

We occasionally have brought to our notice cases such as you describe, where the patient is troubled with this apparently false image. We believe that this is due to internal reflections in the lens itself and it is only when a peculiar condition in the eye prevails that this is noticeable. It would require rather a lengthy explanation to perhaps make this subject of internal reflections entirely clear, but we might advise you that we have known cases of a similar nature which were cured by substituting a lens with a different base curve than the ordinary 6 base toric; the idea being that the wider angle of reflection in the stronger curve lens will throw the image or rather will throw the false image outside the line of vision.

We are pleased to send you through your jobber, together with the lenses which you sent to us, a pair of lenses of the same powers as the ones you sent, but made up in a 7.50 base instead of a 6 base. Have your patient try them. Such questions as these are of much interest to us and we trust that you will not fail to advise us, if your patient notices any relief from the annoyance he has been subjected to with the 6 base curve lenses, after he has worn the 7.50 base curve.

April 27, 1915.

American Optical Company,

Gentlemen:—In answer to your letter of April 1st, we are pleased to inform you that our patient has been wearing the lenses you sent us with perfect comfort. This is the first case of this kind we have had and were at a loss to know where the trouble was.

We certainly appreciate the interest you have taken in this matter.

Thanking you again, we beg to remain yours very truly.

Answer: We are in receipt of your valued favor of April 27th and are very pleased to know that the 7.50 base curve lenses corrected the difficulty your patient was experiencing with the 6 base curve.

Great progress is being made at present in optometrical work and we find that the progressive optician and optometrist are taking advantage of the fact, that the factory are manufacturing lenses which are more nearly theoretically correct for different refractions, than ever before. We ourselves are manufacturing a line of torics in 3, 6, 7.50 and 9 curve, and we find that there is a very general demand for these lenses.

Yours very truly, AOCo.

Definition of Differences in Colored Glasses

Mr. H. T. Reeve:—I had the pleasure of hearing your lecture when you were here on the 20th on colored lenses, and as I could not remember all that you said I am going to ask if you would be so kind as to let me have an outline on the different colors, Smoke, Amber, Blue, Green, Luxfel, Noviol, Akapos, Amethyst. What colors do they take away which would be injurious to a person wearing them all the time?

I have the pleasure of buying all my frames, mtgs., etc., stamped AOCo. I have recently tried another line, but it does not compare, or even look like the merchandise your firm puts out.

I wish to thank you, and trust that some day we shall meet.

—Pittsburgh

May 4, 1915.

Answer:—Regarding a little further data on the different colors, I will certainly be very pleased to help out in any way I possibly can.

In the first place you will remember that I stated that we divided all these colored glasses up into two distinct types. The first one is the Tinted, that does not sensibly alter colors when one looks through them; the second is the Colored that alters colors when one looks through them.

Next, I defined what would be our ideal specification for a Tinted glass and decided that it should—

1st—be practically invisible on the face, the same as white glass,

2d—that it should eliminate all the ultra-violet rays,

3d—that it should eliminate all the heat rays,

4th—that it should not alter any of the visible colors. We call the

"Mine eyes are made the fools o' the other senses, or else worth all the rest."—Shakespeare.

Continued from Page 55)

visible colors, red, yellow, green, blue, and violet.

5th—it should be commercially available, i. e., free from bubbles or striæ, and with an even distribution of color in the lens.

Considering now briefly the various Tinted glasses on the market, we must enumerate among them, smoke, amethyst, Luxfel, Non-Viultra, also white glasses; of course, we include among them, the pebble, also very, very light shades of amber, blue, green, Noviol and lastly the Crookes Glass.

The glass that, in itself, combines or rather fulfills the different specifications enumerated above is, we have decided, the light tint of Crookes. Most others all have more or less disadvantages. For instance, the smoke was not particularly effective in cutting out the ultra-violet unless it was in a dark shade; then when it was in a dark shade it cut off too much of the visible light. The very light shades of amber, blue, green, and amethyst were totally ineffective in cutting out the ultra-violet. The same remark applies to white glass, while pebble is the worst of all. Luxfel and Non-Viultra were fairly good, but did not quite come up to the Crookes glass.

Coming now to the Colored glasses; among these we included the darker shades, such as red, blue,



None are Genuine Crookes Without this Sticker

green, amber, Fieuzal, Euphos, Akapos, Hallauer and Noviol.

The ideal specifications for our colored glass were—

1st—it must be pleasing in its appearance, both to an observer and to the person wearing them, and therefore to suit everybody, it must be made in different shades of colors,

2d—it must filter out the ultra-violet rays entirely,

3d—it must filter out the heat rays,

4th—it must absorb the violet and some of the blue rays, but let through the red, yellow and green, practically untouched.

5th—it must be commercially available, etc.

You will remember then, that among these colored glasses, we decided that the Noviol filled these specifications better than any of them. Blue was especially bad, because it let through the ultra-violet. Green, while it cut the glare out slightly more, dimmed off the rest of the light so much as to make it worthless. Amber, Fieuzal, Akapos, Hallauer and Euphos were very fairly good in absorbing the ultra-violet, but they all dimmed off the other colors to some extent and in that way were inferior to the Noviol.

Now, in comparing the Tinted with the Colored glasses, we have to remember that we would not recommend for general wear a colored glass, because, as I explained, the colored glass is meant to cut out the violet light and some of the blue, and if the wearer were looking through a glass which formed that property right along, then it is highly probable that he would, in time, become color blind to violet and blue and this would be very undesirable. The colored glass would, therefore, be worn just occasionally for sporting purposes chiefly, where one requires keen vision at a long distance. A tinted glass on the other hand, through not altering color values, should be worn regularly in place of white glass."—H. T. Reeve.

Get The Look of Blank Amazement on the Team?

They thought the picture would show the folks what brains and beauty win our games! Note our bright and brassy battery. *They* should fear publicity!

See that little round face at the end of auto row? That's C. Fred Hill, our office factotum, in charge of baseball. Enter Fred, with pronounced optic twinkle! "Say, Fred got a battery yet?" Fred galvanizes, the old right flicks off a few imaginary coat specs, the ever-ready 'varsity left pets the big chin stubble and the edging process towards a quiet little corner is under way. "Confidentially" says Fred, "Yes! Capt. McIntyre of the order dept.'s going to lead 'the boys,' Cy Peloquin and Vernon are to pitch and Lavoie and Gilson catch." All this in strictest confidence! ! ! Fred's a regular Coca-Cola diplomat.

First game won against Dean Academy, 13 to 2. Second, trimmed Fitchburg semi-pro. team, 13 to 2. Then Webster 8 to 3. Newport 4 to 3. No defeats. Next?



Gilson, catcher

Vernon, pitcher

Machinery Catalog Ready!

Our new machinery catalog, for which you were requested to send in your name to receive a copy, is now ready and a marvel of exquisite workmanship, beauty, and simplicity of arrangement. In its fifty-two pages are included *sixteen* bench combinations, the most complete and varied list of machinery combinations and accessories yet offered, we believe.

At the time of our last machinery catalog, now obsolete, we had only *two* bench combinations to offer. However, the almost phenomenal development of our machinery department has within the last two years increased our combinations from two to sixteen in number and wrought a radical and advanced change in the whole department, including many entirely new items of machinery.

In keeping with this happy and remarkable progress we have put several months' work into the preparation of a catalog which would be worthy of the subject. Consequently, when it is issued shortly it will represent our supreme satisfaction at having treated the growing subject of machinery in a large, fitting, and complete way.

The smallest optician and the smallest shop, as well as the largest shop, have alike been considered from every point of view. Our sixteen bench combinations consequently range in price from $125 to $418—each combination of the utmost practicability, space and labor-saving nature.

If you have not sent in your name already, do so now, for no shop should deny itself the information which we have classified and bound up so beautifully in a permanent machinery record. *See back cover of this issue.*

Crookes to Order in Onepiece and Kryptoks

April 29, 1915.

American Optical Company,

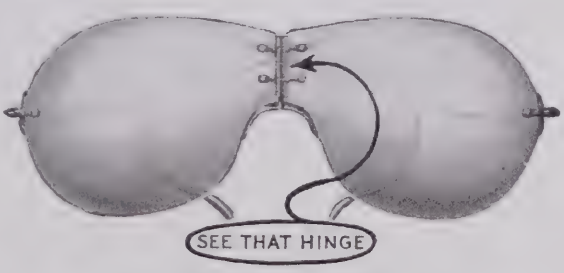
Gentlemen:—I have recently used a pair of Kryptok Crookes lenses with my correction. I am wearing them with much pleasure and comfort and write this note to assure you of my sincere appreciation of these lenses. I have prescribed the Crookes glasses in a number of instances with very gratifying results, so that I am very hopeful that these new glasses may prove very useful. I am additionally pleased now to know that they can also be made in the Kryptok form as this will enlarge their field of usefulness."

An M.D.

THE AUTOGLAS Is a Nationally Advertised Motorglass

Trade Mark, Reg. U. S. Pat. Off.

IN calling the attention of the trade to this glass, as we have in the last several issues of the Amoptico, and before, we have done so particularly because we believe in the superlative goodness of the AUTOGLAS as compared with other eye protectors and goggles.



(Patented May 2, 1911

It is the glass for the discriminating wearer of an eye protector, and is adapted to every out-of-door use, where glasses are desirable, and it answers every requirement for eye protection.

It is advertised in the National Magazines, that we will gladly supply cut-outs, upon which the glass may be displayed, as well as other window cards, electrotypes, blotters, and circulars, to those who carry the AUTOGLAS in stock, and push its sale.

The AUTOGLAS may be procured from all wholesale optical houses.



"The Hand That Rocks the Cradle" Sells Fits-U's



Have you heard the story of No. 17M52, our brand new Glad Hand? No? Well, stick around and hear a new version of the Darwinian theory!

It seems that Oswald Beaumont Carson, our ad manager, has shaken hands with most of the trade from Hellgate northward since 1910. During these years he became father of Amoptico, issued a catalogue and hit a beer truck with his Oakland.

The other day he swiveled on us, developed dealers' helpus and had his Varsity right put in a plaster cast. Today you are *all* extended an invitation to shake with a life-sized imitation for $1.50 each. It's like joining the old Buffalo Club—you get my eleven cents—I get it from the public-at-large.

Note the graceful, tapering fingers on our "Wizard of Os" being neatly manicured by Dr. Morton Judd, our clever little plasterer from Paris. Get the delicate curve of wrist and fingers on "doc" and patient!

The thumb and forefinger are grooved to hold the wonderfully artistic Fits-U mountings, six cards descriptive of which go with the hand. Another card on KeeLocK completes the series, to which we shall add from time to time.

The uses of this model hand—while its main purpose is to display finger-piece mountings are varied and practical. It can be shifted quickly and easily; on the fitting table or in your window it stands out a very striking feature. It faces the observer just as if he or she were about to put the glasses on, carrying a continual suggestion of purchase to the public.

The Glad Hand, though not purposely made so, is likewise adaptable to small eyeglass or spectacle cases which can be inserted between thumb and palm while displaying the eyeglass itself. If desired, several optical specialties such as Amoptiscopes, and readers can be displayed. The jeweler-optician can hang wrist watches or bracelets on it—we should fret.

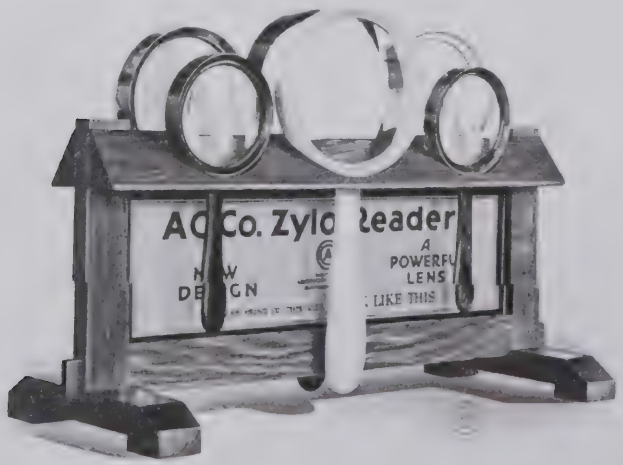


No. 17M52 Pat. Pend. Glad Hand

The pedestal on which the cards are placed is made of bronze green, setting off the white hand attractively. The total height of this life-sized hand is 8 inches. Truly a marvellously beautiful little display with no finer message than to advance your interests; it is another model salesman of great possibilities. No. 17M52 at $1.50 each, F. O. B. Southbridge.

To Our Zyloware Readers!

We announce the latest fashions and designs. Our zylo readers, which were the outgrowth of the interest in our Amoptiscopes, have taken a firm hold because of their improvement over the sombre, dusty black readers of long ago.



We now present a line with four such beautiful finishes as only Zylonite lends itself to. The complete line includes dark shell, ivory white, mottled amber and lustrous black. In sizes the lenses run from 2 to 2½, 3 and 4 inches in diameter.

The latest feature is a handsome stand to accommodate the entire four styles. This new stand holds three readers on each side, is finished in rich walnut stain and carries with it a centre card in deep red and sepia brown. The readers and stand when set on view in your window, fitting table or show case of any sort afford one of the most artistic and stylish display fixtures it has been our privilege to get up for you. Order now, for this stand will accommodate old and new zylo readers and add permanently to the distinctive features that make your shop an up-to-date Quality establishment. Price, $1.25 for stand only. Order from your jobber.

The New-M94-Drill Promised in April Amoptico

WHEN a lens is drilled by our latest design lens drilling machine—M94—it has been put through a course of sprouts by a quick, simple, accurate method, that leaves a clean, beautifully drilled hole in the lens.

Handy Arrangement. In operating, the left hand grasps the horizontal barrel on the left. The thumb reaches forward to the small lever shown at the left of the lens chuck, and by the application of pressure separates the pins holding the lens. The middle finger contacts with a latch on the underside of the barrel, which releases a lock and permits the lens to be tilted for flat or toric work.

The barrel as a whole, carrying the chuck with it, is removable about its support at the left, which facilitates placing the lens in position, and also permits drilling of the lens on the second side by placing it directly on the pin support under the drill, which ensures absolute alignment of the hole.

Rapid Work. With the automatic mélange feed the right hand is free to operate the drill, insert and remove the lenses. Complete control of the location of the hole, the opening and closing of the chuck, rotation of the same for flat or toric lenses, is at the finger ends of the left hand. Thus, very rapid work is assured.

Another latch, located on the barrel support, engages in various slots for drilling above or below the center.



M94. Patented. Other Patents Pending

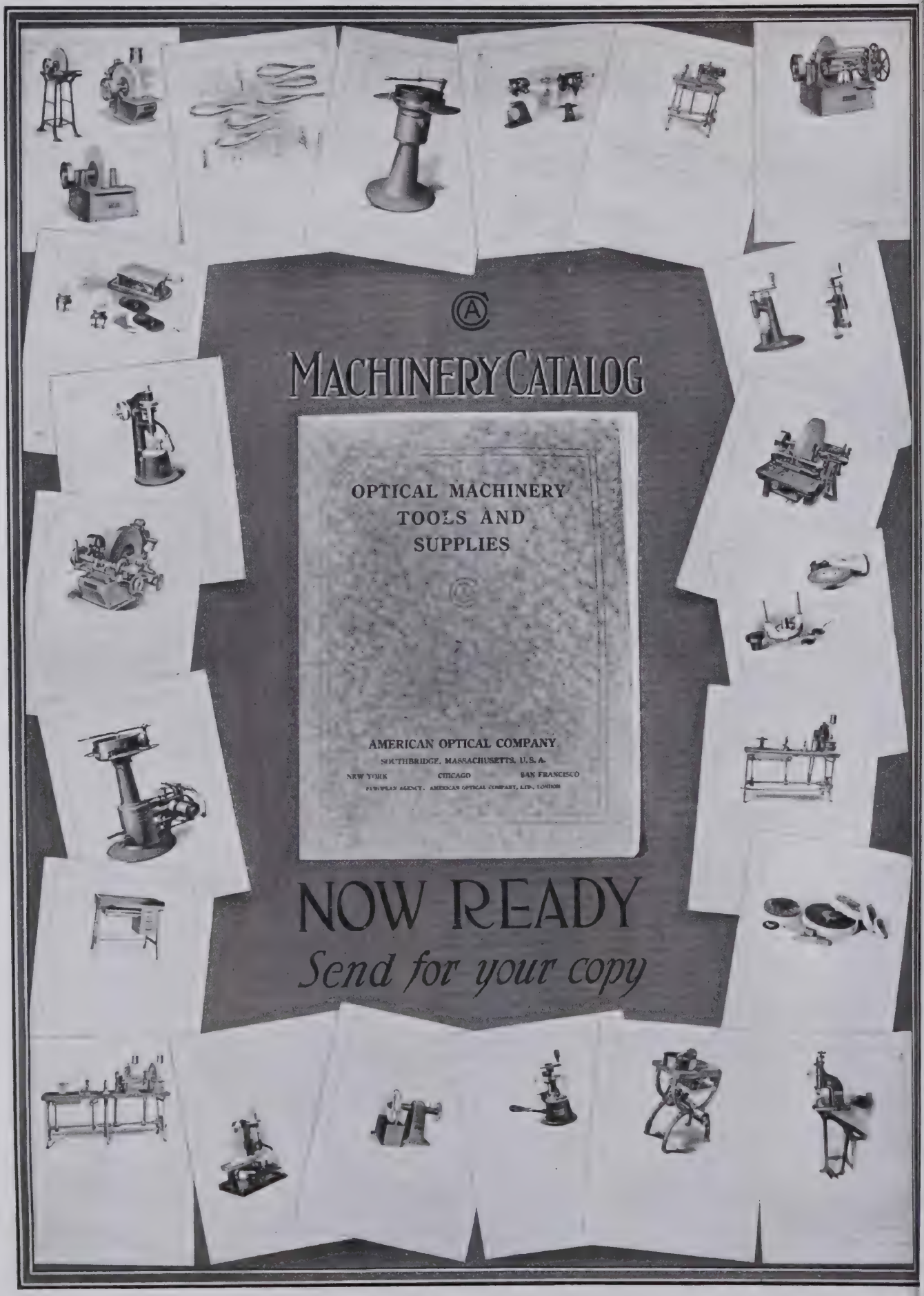
The M94 preserves the best essentials in drilling machines that have preceded it and combines several additional features that will commend it to the trade.

Catalogue Number	*Description*	*Price*
M94-b	**American Drilling Machine** *with turned diamond drill,*	**$50.00**
M94-a	**American Drilling Machine** *with splint diamond drill,*	**43.75**
M94	**American Drilling Machine** *with steel drill,*	**37.50**

These drills regularly furnished with mélange feed. If desired without mélange feed, deduct $6.25 from above prices. Extra for attaching to bench, including M11 countershaft, belts and pulleys, $9.40.

Approximate net weight 12 lbs. Approximate gross weight 25 lbs. Approximate outside dimensions of case packed for export, 1 ft. 2 in. long, 11 in. wide, 1 ft. 1 in. high. Code word M94-b *Fedriltur*, M94-a *Fedrilesp*. M94 *Fedril*

All Adjustments At Your Fingers' Ends"


A
MACHINERY CATALOG
OPTICAL MACHINERY
TOOLS AND
SUPPLIES
AMERICAN OPTICAL COMPANY
SOUTHBRIDGE, MASSACHUSETTS, U.S.A.
NEW YORK CHICAGO SAN FRANCISCO
EUROPEAN AGENCY: AMERICAN OPTICAL COMPANY, LTD., LONDON
NOW READY
Send for your copy



J. Albert Julia

Foreign Department Extension

IT is not many days since the American Optical Company acquired the foreign department of the Julius King Optical Company of New York. The entire export organization, stock and equipment were moved to Southbridge, whence the business is being carried on, on a vastly enlarged scale in conjunction with and as a part of the American Optical Company's Foreign department.

In charge as Manager of sales for Central and South American countries, in the AOCo Foreign Department, is J. Albert Julia, for sixteen years active head in New York of the King export organization. His familiarity with the requirements of Latin American customers makes him of invaluable assistance in extending still further the work of that division of our foreign department with which we have long been serving the same trade. With our extensive manufacturing facilities and the advantages of centralized service the scope of the American Optical Company's Foreign Department will thus be greatly enlarged. A complete export catalogue is now in course of preparation and will be issued within a few months.

The Story of the Pill and Lens

PRENTICE once made the famous remark that "A lens is a pill." Pills, however, have some characteristics in common with some lenses. That is, though they are "taken" the process is not always agreeable and the effect not always desirable. The busy buyer cannot possibly examine every lens personally. He must take his pills and unless he is willing to specify AOCo lenses and see that he gets them, the pills may be bitter.

The AOCo name and trade mark on a lens envelope means that there is a factor of safety in the lens it contains. It stands for standards, rigid and inflexible, established to protect the interests of the lens buyer. Incidentally this adherence to a definite idea in lens making has created a certain world-wide reputation for AOCo lenses. That is why AOCo lenses are used all over the world.

Keep Your Eye on the Basket

SOME fellow once wrote an old saw about the inadvisability of putting all your eggs into one basket. Mark Twain had the last word on the subject and in his inimitable way paraphrased it with the remark that you would do better to put 'em in one basket and *watch the basket*.

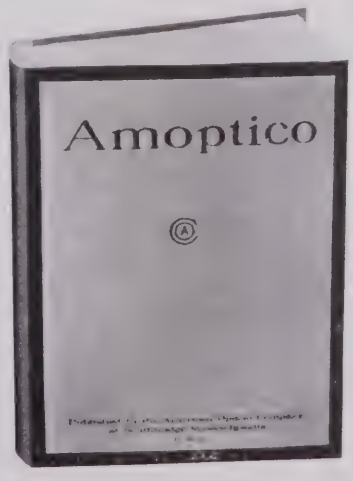
All of which leads up to the point we started out to make about concentration of effort in purchasing and selling and what it means to the man who buys optical goods.

The buyer who scatters his purchases frequently lives to regret it for he is unquestionably handicapping his selling efforts. "Watching too many baskets" is not a sound principle and the end of the year may show a startlingly high percentage of selling expense or an inventory of more or less unsalable merchandise—or both.

Some of the wisest buyers of optical goods have figured it out in dollars and sense. They now use AOCo goods exclusively.

Amoptico for Ready Reference

IF you have no binder in which to keep your Amopticos filed away neatly from month to month, this trim little red and gray binder is the very thing.

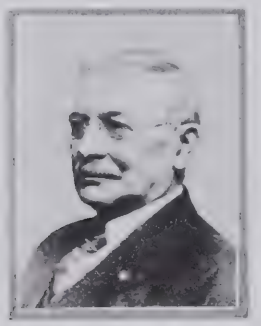


So many new and scientific subjects, new goods, perplexing questions, etc., are coming up nowadays that the Amoptico has become an invaluable reference book. Keep up your files with one of these binders, for 30 cents only and well worth the small labor of filing each month.

Just a Few of Our Worthy Representatives Whom You All Know

AT times one suffers the keen pleasure of trying to tell a story of service and personality which words cannot express. The American Optical Company is identified with a score of such men.

W. H. Hurlburt has spent his life in the optical business and won a rare host of personal friends throughout the trade, though he has only spent 15 out of his 50 optical years with us. A man whose pleasant solicitude, old-school courtesy and sterling



W. H. Hurlburt

abilities brought him to us and have firmly ensconced him ever since in the affections of the company, and the trade. He is still the Dean of our outside representatives and enjoys the respect and warm regard of those who appreciate loyal devotion to the best interests of the firm and its customers.

And here's Billy Bugbee! What's the use of introducing this AOCo "Roadster" either.



L. B. Bugbee

"We didn't raise our Billy to be an optical encyclopædia," but he is one. He carries more baggage than this. Ask him.

Among the younger generation of old-timers comes Pitt H. Herbert, our division superintendent, who is known for only



P. H. Herbert

one sly trick in his entire career. He worked his way into a job here before he was of proper age and was fired for being too young. But "Pitt" came back, started selling pop-corn balls and has stuck ever since. And now, after thirty years' service it's a pleasure to record the rise into a division superintendency of our sunny dispositioned, invariably courteous and considerate "Pitt"—one who knows the optical manufacturing game from double AA to double ZZ.

Onepiece Bifocal Lenses

Patented. European Trade-Mark "UNI-BIFO" (LUXE)

Since the great invention of bifocal spectacles by Benjamin Franklin—for an hundred years, in fact—men have known that the ultimate, the ideal, bifocal lens would be produced by grinding *two foci on one piece of glass*.

The brightest inventive minds have sought vainly to make such a lens without a distinct zone or halo between near and distant portions and with true spherical curves.

The processes recently patented for making such a onepiece bifocal lens mark a successful culmination of those generations of experiment, made possible by the development of precision machinery used by the American Optical Company.

Onepiece Bifocal Lenses are, without question, the greatest achievement in ophthalmic lens grinding. Jobbers will give you more information.

MANUFACTURED BY THE

American Optical Company

SOUTHBRIDGE, MASS., U. S. A.



ANNUAL SALES CONFERENCE, JUNE 14th-19th, 1915

(Standing)—O. B. Carson; W. H. Hurlburt; R. S. Turner, Chgo.; F. N. Kreissl, Chgo. Mgr.; C. F. Hill; H. C. Ray; J. H. Bohling, N. Y. Mgr.; J. E. Eaton F. Kropff, N. Y.; M. F. Judd; G. L. Treadwell. (Seated)—H. J. Brackett; A. E. Hughes; P. H. Herbert; C. G. Hilton and R. Schädla.

There Was Harmony, Fun and Instruction Galore

AS Sales Conferences will go, the annual cabaret of Rhetoric between the outside representatives and the production forces was staged in the AO lecture hall over a series of ice pitchers, sample trays and bald heads from June 14th to 19th.

However, owing to popular prejudice in Southbridge, New York and other large cities against staging large theatrical productions in private establishments under the guise of cabarets, it was deemed advisable to hold the festivities on a smaller scale than in previous years. Notable among those missed were Manager A. C. Smalley of the San Francisco Branch, J. P. Petherick, the London AO Agent and A. "Jock" Moseley of the same office, besides others of our foreign and domestic representatives.

Nevertheless, a sterling quartet appeared at the first performance, and became so popular they were engaged for the week. They were the famous Price-Service Quartet of well-known artists, composed of Manager F. N. Kreissl and R. S. Turner of the Chicago office and Manager J. H. Bohling and "Ferd" Kropff of the New York office.

The latest selections in machinery, gold, lenses, zyloware, gold-filled, white metal, advertising and a score of other fingerpieces were delivered to and by the quartet. They proceeded right off the bat to work in some exquisite "swipes" not originally inserted by the composers; and they picked out a few rare chords in "Where is My Bubbling Centex Tonight" along with that popular fingerpiece melody "Deliver Me to My Loving Jobber." A third song by the AO four entitled "Who Knows but Price May Wreck Us" captivated the audience, so pathetically was it rendered.

There was harmony galore! The official Convention song, originated by a deceased salesman of a famous salve concern opened and closed the Conference in a conventional manner. Messrs. Kreissl and Bohling sang the alternate verses on Service and Price, while the factory chorus came in strong with the Finish and Chin Chin Tauric demonstrators.

Every time there was a kick from these Knights of the road with their rear end drive, the principals engaged in a good old game of "Passing the Buck." All joined in merrily and the fellow that got it eventually was the man in the factory—our great, noble foreman. Rhetoric won.

But after all was said and done, corrections made, improvements suggested and kidding passed around freely like religious tracts, it was the best little Sales Conference ever seen. We took the visiting salesmen into every important department in the factory and set them to work on the practical factory work for half a day. The demonstrations given were followed up by talks and questioning to clear up trade and manufacturing problems.

When it was all over the whole office force rushed off in automobiles to the New AO Quinebaug Country Club where a monster clambake was set down before the crowd, including the Messrs. Wells and those crackerjack baseballists, Kreissl and Bohling.

Then "Billie" Bugbee took a fall out of Kreissl for an appetizer, bust his KeeLocK and hit his head on a large rock. The first thing he wheezed when he came to was, "Gee, that's a pretty good ad for KeeLocK. The lens bust, see, but the KeeLocK's still intact." And so it was—it stood more'n Bugbee's head did and that's going some, isn't it?

Historic Figure in Optical World Passes Away

AFTER well-nigh fifty years in the optical business, during which he built up the great wholesale house of D. V. Brown, Philadelphia, Daniel Vinton Brown passed away on December 7 last at the age of 65 years.

Southbridge, which witnessed his boyhood and first business experience though he was born in Wilmont, N. H., is full of reminiscences about the personal charms and ability of "Dan" Brown.



Daniel Vinton Brown

Mr. Brown's apprenticeship prior to his entrance with the American Optical Co.—which, by the way, at that time was not known as the American Optical Co., but as R. H. Cole & Co. —was in the Hamilton Woolen Co.'s Mill at Globe Village, Southbridge, where it was customary in those days to go to work at 5 A. M. This was hard, as we view it in these days, so that Mr. Brown, knowing what it meant to work, always had a soft spot in his heart and a fellow-feeling for the man at the bench. Mr. Brown's business ability was formed early in his life by the thought that to get along, close application to the work before him was the best and safest course to pursue. He always took a special pride in his work at the bench, and often in later years, spoke with pride of how he used to hold his file and the care he took of his tools in order to get the best service from them and the neatest finish on the work.

So it was at this time that he began to reveal the business ability that later brought him such success.

It was his custom long after he formed the closest friendship with the late George W. Wells, to return to Southbridge two or three times a year. He would visit the shop, chat around with old bench mates and visit his sister, who still lives in the Globe Village section of Southbridge.

Daniel Vinton Brown was born July 22, 1850, at Wilmont, N. H. His father early moved to Southbridge, Mass., to enter James A. Gleason's box factory. Later the father went into Gleason's grocery business. In the meantime Daniel was growing up and attending school in the Globe Village. After graduation he headed for the American Optical Co. where, in 1867, he joined with that now historic group whose pioneering foretold the world-wide growth of the great American optical industry.

About the year 1880 he left the AOCo, becoming one of the founders of the Southbridge Optical Co., and when the new company moved to Boston he went with it. Shortly thereafter he entered the employ of James W. Queen & Co., Philadelphia. The first thing he did upon arrival in that city, as he used to tell it, was to deposit a small amount in the bank to ensure getting back home to Southbridge if the worst happened. But he remained and next became associated with the Philadelphia Optical & Watch Co. Two or three years before the Philadelphia Optical & Watch Co. ceased to do business, Mr. Brown, in 1890, founded the house of D. V. Brown, Wholesaler in Optical Goods, in one room on the second floor of 734 Sansom St. The size was 18 x 45 feet and half was store or office and half was shop. Many employees are still with the house who were with Mr. Brown when he started. His business ability and sterling qualities brought such results that in regular succession, at suitable periods, came the occupancy of the first and second floors of 734; then came the first, second and third floors of 740; then 738, until this business now occupies the three floors of 736, 738 and 740 Sansom St.

To see him justify expectations by building up one of the strongest wholesale businesses was one of the greatest delights of his many friends. Under the firm name of D. V. Brown he continued in the optical business up to the time of his death, although a large measure of his responsibilities during his later years fell on the shoulders of his son, Andrew.

"Dan" Brown's was a big, magnetic personality that endeared him to hosts of friends. He could adapt himself to any social or business occasion, and upon these qualities and his selling genius was built the power and prestige of his optical house.

The Passing of an Optical History Maker—Father of the Trial Set

Frederick G. Blanchard, after 47 years' service with the American Optical Company, died on Easter Sunday in Southbridge, Mass., at the age of 67 years, 5 months, and 29 days. Since the death of the late George W. Wells, who entered the optical business four years before him, in 1864, Mr. Blanchard had become the oldest employee of the Company.

While he enjoyed the distinction of being a large factor in America's great optical development, yet his genius in starting, developing and expanding the trial case department of the optical business at the instance of Mr. Wells remains as his great, permanent contribution to the advancement of the profession. He was known as the "Father of the Trial Set" in America and held an undisputed position as the final authority on all the intricacies of these instruments. Aided by years of experience and study, in charge of the lens grinding department in the old factory, he built up the trial set business from nothing to the sale of thousands yearly. He foresaw the importance and possibilities of the trial set as a new field. As a result, while he himself never became widely known through the trade his trial set became known the world over. But its history throughout is, nevertheless, the history of Frederick G. Blanchard.

When he began in 1868 there were 85 employees only in the American Optical Company. There are now 2,600. He was put in charge of the edge grinding department. All lenses were then imported in uncut form. Later his duties were widened to include oversight of all assembling of parts in frames, inspection for quality, size and accuracy, etc. When the new factory was built and the entire lens plant moved to it from the main factory about twenty years ago, Mr. Blanchard was given the opportunity to start the trial set business. His pioneering brought results and with the rapid growth of the business he continually brought forth improvements with an untiring energy and progressiveness that is said to have been characteristic.



F G. Blanchard

During his career he saw the company rise from only a few employees to the largest of its kind in the world. For the past fifteen years his invaluable knowledge about the trial set had kept him in the main office, from which he directed the trial set business and where he was consulted on the multitude of problems connected with this business into which he had grown so deeply and effectively.

On his personal side, about the office, he was greatly beloved for a lively, droll nature and sudden wit. He was considered the best after-dinner speaker on any subject in the company, and famous for a wealth of anecdote that was an inexhaustible fund of humor employed at the most unexpected moments whether in or out of business hours.

Like most of the sterling old timers, he was deeply religious and a man of strong convictions, but with a capacity for viewing both sides of a question and being convinced accordingly.

Mr. Blanchard was born in Charlton, Mass., October 5, 1847, son of Albert and Mary Ann (Goodell) Blanchard, moving shortly thereafter to Southbridge. Besides his wife, Jane McVey, he is survived by two daughters, Grace M. Blanchard of Cambridge, and Mrs. Eugene G. Walker, Southbridge. He leaves one son in the optical business, Albert Blanchard of Folsom & Blanchard, Atlanta, Georgia.

NOVIOL *Is Setting The Pace in Colored Glasses*

(Trade Mark, Reg. U.S. Pat. Off.)

THIS remarkable new colored glass should be used in the three shades as follows:

Light — For General Use.

This is the one that is recommended for all general uses in the place of white glass. It is of a very light canary tinge, so light that the fact that the lenses are tinted at all is not observed by the wearer, nor is the fact evident to an observer except by examination.

Medium — For Outdoor Use.

This tint is of a decided canary tinge, and is particularly adapted for use in automobile goggles, eye protectors, and for the use of shooters, engineers and firemen, and in any place where a need is indicated for lenses that will shut out the glare effects from the sun, or from intense artificial light sources, and at the same time does not cut down the intensity of illumination sufficiently to affect the acuity of the vision. The diminished visual acuity that is caused by blue atmospheric haze is also done away with.

The Medium shade is, we recommend, an ideal glass for goggles, and for shooting and for any effect where sharp definition of objects is required and protection from artificial sources of light.

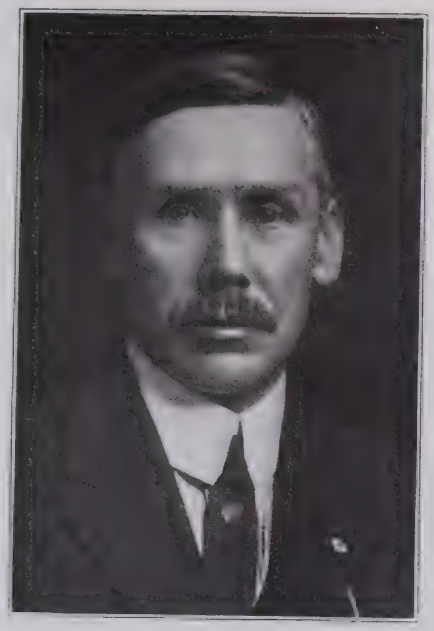
Deep — For Occupational Use.

This is more nearly a true yellow and is the extreme depth in which NOVIOL Glass may be procured. It is recommended for use where special glasses are needed because of the occupation of the wearer making necessary a degree of protection from the intensity of light that would not be afforded by the medium tint. It cuts out, or eliminates, not only all of the ultra-violet rays, but also all the deeper blue and all of the violet of the visible spectrum, which are the rays in the visible spectrum causing fluorescence. At the same time it does not materially decrease the intensity of illumination, and actually does increase acuity of vision. This shade is also desirable for the uses as covered by the description of the medium shade whenever the wearer desires or needs greater protection from extremely brilliant light or reflections, as is the case in mountain climbing, ocean travel and tropical wear. It is recommended for use on very brilliant days to cut out too brilliant a light, at the same time giving that sharp definition of object which the medium shade gives. It will be invaluable in goggles where a dimmed light is necessary.

Our Lensdale Superintendent is Noted for Many Things

DOWN banged the receiver! A handkerchief swabbed a humid brow, "Whew!" said the victim, "did anybody *ever* get Harry Hill on the phone? 'Out in the factory,' they say, but I'll be hanged if I can catch him!"

Had Supt. Hill been sitting still in the twenty years since Lensdale watched him rise he would never have been the executive he is today. Stories are told about his infinite capacity for detail and the unique mechanical ability that has contributed to the greatest collection of optical grinding machinery in the world today.



Supt. H. W. Hill of Lensdale

The constant energy and indomitable perseverance that survived injuries of all sorts, from broken ribs to the loss of many fingers, has been capitalized into success. There are few minutes when the office chair at Lensdale is warm; ceaseless rounds of inspections and consultations with 1200 employees and foremen constitute his daily task. Few men take their responsibilities with greater seriousness than he and this is one conspicuous trait that has held him to his duties with unflagging zeal.

He needs no files—though he has them—to tell at the moment how many lenses are on the blocks, or answer any one of a thousand questions about the plant. He keeps you moving while he travels over the floors, adjusting a matter here, noting a construction there—always busy.

Factory talk tells of Harry Hill as a stern disciplinarian in office hours—a considerate executive—but one who insists on the execution of and obedience to orders and tolerates no interference.

These are some of the working principles that have put him where he is. If you should ask any official what they considered his outstanding qualities, they would say, "Loyalty to the AOCo, sound business judgment and executive capacity." If you asked the factory force what they thought, they would say, "Enthusiasm for the welfare of employees, active interest in sports, receptiveness and appreciation of new ideas and unbiased judgment in disputes." Consequently, when the big executive councils are held up yonder a most potent factor is Harry W. Hill.

It is this executive who is known in correspondence or person to so many of the trade. During the seven years of his superintendency he has raised the standards of inspection of lenses and other manufacturing methods over twenty-five per cent and brought Lensdale to a high state of efficiency.



The result of this "out in the factory" vigilance is now reflected in the quality of AOCo lenses. The reflection of Harry Hill in the minds of those who know him out of the factory is that of a "prince"- to use a trite but applicable description. The Hill cottage is the center of Southbridge hospitality, which tells more completely than words about the personality of its owner when away from business cares.

Harry W. Hill was born in Birmingham, England. Educated at St. James' Church School, and came to the United States with his parents in 1888. Settled in Meadville, Pa., entered the employ of the Dick & Church Engineering Co. of that city. Later employed by the General Electric Co., Schenectady, N. Y. In 1893 his parents moved to the Anaconda Mountains and "H. W." came to Southbridge and entered the employ of the AOCo, working for Nelson M. Baker, now Supt. of the Fingerpiece Department; one year later was transferred to Lensdale. Placed in charge of Machine Construction and Design. Employed in this capacity for nine years, during which time the Lens surfacing machinery was entirely remodeled and methods and machines perfected for grinding Toric Lenses. This work was all done under his supervision.



"Over the bridge to Lensdale"

After leaving Surfacing Department was next promoted to be Superintendent of what was known as Inspection Department, which then included Machine Shop and all operations on lenses. During this time he was directly responsible to A. B. Wells, who trained him, in this work, for greater responsibilities. In 1909 he was given charge of the Lens Surfacing and Machine Construction and Design departments and for the next three years much time was devoted to increasing production in Meniscus and Toric Lenses, which were rapidly growing in favor with lens users. In 1911 it was thought best to consolidate the supervision of the entire Lensdale works under one head and H. W. Hill was appointed General Superintendent of Lensdale works, which position he still holds.

During his twenty years of continuous service with the AOCo remarkable strides have been made in ophthalmic lens work, and it has been his privilege to assist in the development which has put Lensdale on a scientific, efficient basis.

Years of Experience Enlisted in Your Behalf

A JOURNEY in search of news led direct to White Metaldom, a little world owned and inspired by Foreman George L. Tully and 350 kin.

The famous blue cap was there and a keen Irish eye was cocked slantwise beneath it. Only the privilege of friendship and a sense of humor made the subsequent command a success.

"Trot out your best bet, sir! What've you got here to boast about?"

He galvanized into action. "Wait a minute," and back he came with 127 years' worth of seasoned veterans, four in a row.



127 Years of Service in AOCo

H. J. Jackson, 25 yrs.; C. Rose, 46 yrs.; M. L. Gardner, 25 yrs.; G. L. Tully, 31 yrs.

When these men began, from 46 to 25 years ago the A. O. Co. was in its infancy, as it still is. White metal was then unknown in its modern sense. Steel goods were manufactured, but the optical industry had not then begun to split up into separate units, each one—gold, gold-filled or steel, etc.—being a separate business by itself. All lines were made under one roof, where now a multitude cover the AO departments.

Each one of these men has played his part in the making of all kinds and parts and finishes of optical goods. He has known the game from the ground up; has been part and parcel in the development of new machinery, devices, patents and ideas. In him may be noted at once the source and the strength of our splendid growth under the direction and impulse of farsighted executives.

To anyone who is interested in White Metal goods these facts are of interest because the slightest thought about growth and quality leads straight back inevitably to the organization that developed them.

In showing you four of the men who make up our White Metal organization we are not ignoring others who represent the vital spirit of the A. O. Co. like the two who have shared the same bench for thirty-three years together. There are many more like them among our 350.

Somewhere in the recent past we heard that gold-filled was raising havoc with White Metal sales. It is an open secret with this department that it has never seen as busy a time in its history as the present.

"As long as they keep coming," "Pop" Tully tells us, "we'll handle the orders out here. They need never worry about us. We can take care of all of them!" Order your White Metal specs and eyeglasses now, or a few invisible eyewires or Amoptiscopes from a concern that knows quality, lives it, preaches it and sells it. Ask your jobber.

Spend Your Christmas in Chains!

IF you have not already taken advantage of this handsome Christmas chain display offering, we are now taking the liberty of calling it to your attention again.

The set is sold complete only, but comprises every style known to be popular with the trade and public alike. In this display box are enclosed one dozen individual Christmas boxes with 6 hairpin chains, 3 cable earloops, and 3 wire earloops. The average retail price of chains is $1.00 each, hairpin chains $1.25, earloops $0.75 and $1.00, all of which, therefore, you can sell for $12.75; at $3.50 the set to you they offer splendid profits. Each chain carries AO 1/10 12K quality. Order now before Christmas. We are just replenishing our original stock and will give you excellent service. This has been one of the most taking features we've ever offered. We want you to profit by it immediately. In order to catch your Christmas trade order from your jobber now.



A Beautiful Christmas Combination for only $3.50

Twice Told Tales About Our London Director

"YOU can say without any fear of contradiction" said a long-time acquaintance of James P. Petherick, the London Director of the AMERICAN OPTICAL CO., LTD., "that he is one of the hardest workers and positively the best informed man on practical business optics in Europe today. He is invariably obliging, courteous, and rough, as his correspondence will show," and I ind this was true. Letters picked at random from r London correspondence are invariably couched in felicitous English so typical of British business mmunications in contrast to our formal, perfunctory nerican correspondence. The graceful, deft touch at gives the English business letter its spirit of iability is an accomplishment happily possessed Mr. Petherick.

"It takes an Englishman," some one has said, "to dow the most serious business affair with a certain mosphere of sociability that makes you feel that enjoys business primarily for the game rather than e money."

If his letter happens to contain a matter of very rticular importance it often assumes the bulk of a uminous report. For it is said by all know him that when "King James" therick goes into a subject he exhausts it. Among his many business qualifications me stands more clearly to the front than keen, sound judgment in optical airs. As we have said, he is considered those well qualified to pass judgment undoubtedly the best informed prac- al optical business man in Europe to- . That this is so is evidenced by the quency with which his friendly counsel out business affairs is sought by the ropean trade. When he has exhausted subject with characteristic grasp of tail and broad outlines, whether he is king a report to the Home Office or ising a customer, his recommendations usually accepted as the last word on subject.



The ability that has won him the con- nce and esteem of many hundreds of optical friends world over was first discovered by the late George Wells in 1904. At this time the American Optical pany had decided to establish a European branch. late Mr. Wells made a special trip to Europe. In rching for a manager he was told of Mr. Petherick, London representative of J. B. Jacquemin Bros. Morez de Jura, France, by whom he had been loyed for seventeen years.

As a result, a year later the European branch of the AMERICAN OPTICAL COMPANY was opened in London—on January 1, 1905—in a small room filled with sample trunks and presided over by James P. Petherick, manager and sole employee.

Ten years under Mr. Petherick has seen this small beginning grow into a separate limited company acting as AOCo agents, with a prestige and clientele enjoyed by few agencies. In that period the one-time office has grown from one sample room to the building of the AOCo, Ltd., London, and a staff of twenty-five assistants. At the conclusion of the great twelve months' sales contest just ended, Mr. Petherick of the London American Optical Company, Ltd., was awarded the Grand Prize of a $1,000 automobile for the greatest percentage of increase in sales.

This, in brief, is the record of a strong, constructive personality gifted with an extraordinary capacity for hard work, detail and the executive ability to work out a farsighted business policy.

Splendidly interpretative of the personal regard in which Mr. Petherick is held by the European trade is the general praise sounded wherever his name is mentioned. Our English cousins, who once thought us unsympathetic with their point of view, will not be surprised to find us united with them in our estimate of the delightful personality of J. P. Petherick. "King James" is the pet trade name that has long since branded him a good mixer. The keen, tactful and sympathetic insight into human nature that adds to his unusual capacities is the final reason for his most unique position in the hearts and minds of his European and American friends. He is a diplomat in the best sense.

James P. Petherick was born in 1865 at Swansea, Eng. He was educated privately, also receiving an optical education and attending the Northampton Institute, London. He holds a diploma of the Guild of the Spectacle Makers Company of the City of London. In 1882 he began an apprenticeship of three years in the optical trade at Hereford, England. About the year 1887 he began with the J. B. Jacquemin Bros. Ltd., later becoming their London representative. He remained with them seventeen years, until he opened the first European office of the AMERICAN OPTICAL CO. on January 1, 1905, in London.

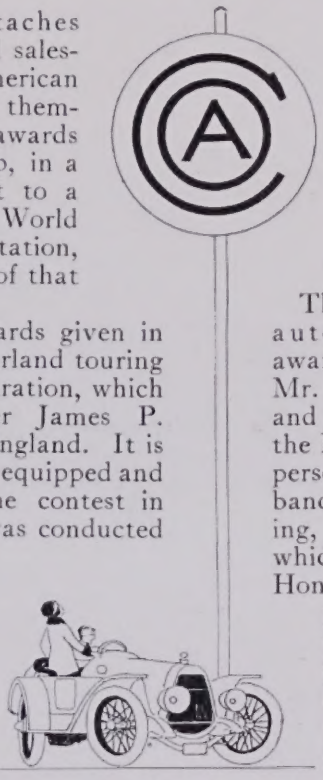
When asked what details about his career he considered of interest he characteristically replied, "Thirty-three years of hard work in acquiring optical knowledge and still learning." This is the widely and intimately known Director and Secretary of our European agency. We join with his many friends overseas in wishing our loyal representative continued prosperity and the greetings of the Christmas season.

Newspaper Comment On $80,000 Rice Salesmen's Awards

CONSIDERABLE interest attaches to the achievements of several salesmen in the employ of the American Optical Company, who have won for themselves some beautiful and substantial awards for highest efficiency in salesmanship, in a contest conducted and just brought to a close by the Rice Leaders of the World Association of New York. By invitation, the Southbridge concern is a member of that Association.



Chief among the awards given in the contest is a fine Overland touring car, shown in the illustration, which was won by Manager James P. Petherick, of London, England. It is a late model affair, fully equipped and specially finished. The contest in which he won this acceptable prize was conducted during 1914-15, and ten thousand leading salesmen of the world took part. There was sharp and decisive competition and in view of trade conditions his forging ahead is a source of satisfaction and pride to his firm, himself and friends. It is a signal tribute to his ability, because it represents a combination of enthusiasm and energy, manifested in such substantial way that it bears real individuality.



Arnold Moseley of London, England, Managers Frank N. Kreissl of Chicago, Albert C. Smalley of San Francisco, and John H. Bohling of New York, and other representatives of the American Optical Company, also got high-class awards for their efficiency. These are in the form of specially-designed, solid gold Elgin watches, each worth several hundred dollars. They are handsomely engraved with the recipients' names, and upon each watch is set forth the reasons for its bestowal.

In addition, four other salesmen of the American Optical Company have made such commercial strides that they are to be given fine awards of merit. They are Ferd. Kropff, W. H. Hurlburt, R. S. Turner and A. C. Witt. These awards of merit are handsomely engrossed with the names of the recipients, that of the Association and various members.

The formal presentation of the automobile and watches and awards of honor was attended by Mr. Carson, Advertising Manager, and John H. Bohling, Manager of the New York office. These same persons attended the elaborate banquet given on Saturday evening, at the Waldorf-Astoria, at which 400 were present. The Hon. Job Hedges, of New York, one of the most prominent men in the Empire State, was toastmaster. At that time the formal presentation of the $200 solid gold watches and awards of honor took place.

Among the awards made were forty specially-finished automobiles, worth $50,000, besides $30,000 worth of specially-designed, solid gold watches, and a number of handsomely engrossed awards of honor.

On Saturday, June 26, the awarding of the automobiles took place before Grant's Tomb on Riverside Drive and the procession of the prize cars, with their famous occupants, moved down Broadway into Madison Square, and up Fifth Avenue to Central Park highly esteemed by admiring thousands. Attached to each car was a velvet banner, containing the Emblem of the Rice Leaders of the World Association and indicating those who have gained such distinctive reward for highest efficiency and salesmanship.



Presentation Ceremonies Before Grant's Tomb on Riverside Drive
J. P. Petherick, London, Winner. O. B. Carson accepting the car from Mr. Rice

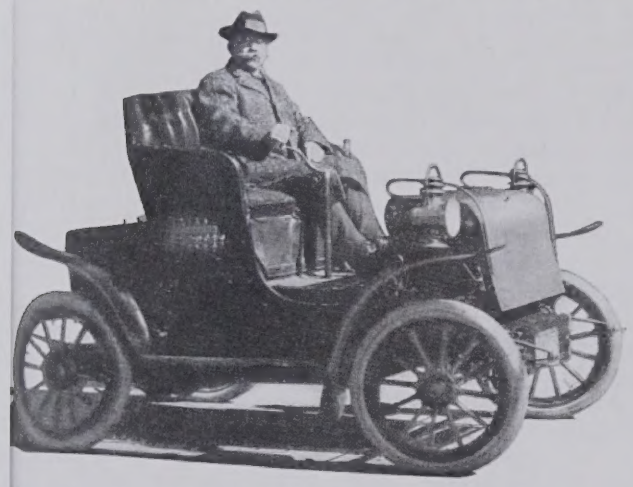
At the conclusion of this great event the prize awards were sent to all parts of the world.

The Retreat of the Irish—By Nelson M. Baker

THE office force was out front sunning itself at the noon hour when down the street came a lively figure, cutting figure eights from curb to curb and gesticulating as if the devil after him. The most holy terror was inscribed on that Irish ntenance.

lose on his heels was a cross between a sewing machine and an Edger. As the runner dodged, the animated box pursued. Up he sidewalk ducked the frightened figure, and shot through the est door. On to the sidewalk pursued the mechanical bedbug, missing a couple of good Irish coat tails by a hair's breadth.

fork resumed ten minutes later, the following monologue was



ered by George L. Tully, foreman of the White Metal Depart-t—and then some!

Look here, Mister man," says he, one eye cocked at Supt. n M. Baker of the Fingerpiece Department. "You want to hat stuff out! Some day that handle of yours is going to bust the guy that's bein' chased won't be as lucky as I was." There undoubtedly dignity, sincerity and Celtic fire in Pop's attitude e then delivered it. But as he tells it now a sparkle of Irish or twinkles in the snappy eyes.

e tells it to show whimsical humor of "Nellie" Baker, the first in ibridge to own an auto and whose mechanical genius led him to build a steam auto of his own.

welve years ago he bought the machine here illustrated. Since , as his fancy dictates, he has driven this sea-going hack around strians, bicyclists, up on sidewalks or anywhere that expedience ires. He operates it with a swivel handle and can turn it with a of the wrist in its own length. It is a common sight to see innocently hedge a scared pedestrian or ride up on to a side-with droll, phlegmatic humor, wig-wagging through our l rural thoroughfares. "Nellie" Baker and his one horse e power have long been Southbridge institutions. He also a big touring car, for these are the man's mechanical play-s and diversions outside the shop.

e mechanical ability that led him to build and retain interest ns in the late 90's had then long been employed in the inven-and development of AO spectacle and eyeglass machinery. irty seven years ago, in 1878, he began work with the American l Company, making spectacle eyes and bridges. In October t year his interest in mechanics asserted itself and he began to the machinist's trade. He was appointed foreman of the ime Department in January, 1891. While here he designed built many tools and automatic machines that have made our goods famous the world over. He made the first automatic machines for edging lenses. In 1904 he was in charge of all the engineering and mechanical departments connected with power transmission of the whole factory, excepting Lensdale. Then, in 1905, came a transfer to the Main Office where he assisted Mr. J. C. Wells in experimental and development work on spectacle and eyeglass lines.

Long previous to their appearance he played an important part in making the tools for the first fingerpiece mountings made in this country. This led to a division superintendency over the Fingerpiece Department in 1907, a position which he has held to date.

If the development of the famous AO Fingerpiece mountings can be credited to any one man the honors belong to Nelson M. Baker. The Fits-U mounting, under his direction, has undergone countless improvements, but never has he allowed its construction to stray from the simplicity, strength and style that have sold it in ever-increasing quantities beyond all competition.

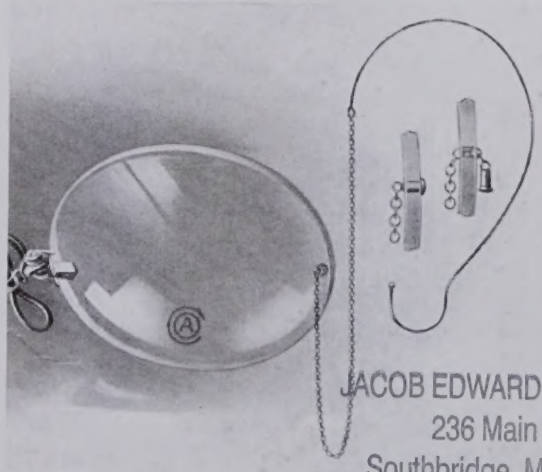
This is the man with the whimsical humor and mechanical genius whom we take pleasure in presenting again because he is one of the young old-timers who've made AOCo goods a byword.

Nifty New Fits-U Chain Snap

THE new Fits-U Snap appears today for the first time. This patented device, for earloop chains only, is exclusively an AO invention guaranteed to solve the vexing problem of snaps for eyeglass chains. The lens is drilled the regular way.

When you wish to remove the snap simply run the chain through the drilled hole, loop wire and all. To put the chain on, draw the loop wire and chain through the hole until the solid end catches snugly in the lens. Simple and ingenious, isn't it? A happy little invention!

No additional charge, but an additional improvement over regular earloops. We make great quantities of chains but the smallest detail never escapes our attention. Order the Fits-U Chain Snap at your jobber's.



JACOB EDWARDS LIBRARY
236 Main St.
Southbridge, MA 01550

JACOB EDWARDS LIBRARY
236 Main St
Southbridge, MA 01550



Optical Heritage Museum
Office at 368 Main St
Southbridge, MA 01550
http://www.opticalheritagemuseum.org
dickwhitney@charter.net
774.230.8016

Dick Whitney Director
Donna Silverberg Curator
Diane Matuck Archivist